LMSC-HREC TR D951500-1B

Lockheed Missiles & Space Company, Inc Huntsville Engineering Center

Cummings Research Park 4800 Bradford Drive Huntsville, AL 35807

Appendix B

FILAMENT WOUND DATA BASE DEVELOPMENT

Revision 1 March 1985

Contract NAS8-35054

Prepared for National Aeronautics and Space Administration Marshall Space Flight Center, AL 35812

by

R. Scott Sharp William F. Braddock

(NASA-CR-179070) FILAMENT WOUND DATA BASE LEVELOPMENT, REVISION 1, AFFENDIX B (Lockheed Missiles and Space Co.) 970 p CSCL 22B

N87-21017

Unclas 43360

APPROVED

C. Donald Andrews, Manager Systems Anal. & Sim. Section

G3/16

FOREWORD

This appendix presents the data Tape 8 data in tabular form. Each page consists of six-component force and moment coefficients as they vary with angle of attack at a specific Mach number and roll angle. The angle-of-attack range is from 0 to 180 deg in 5 deg increments. The six coefficients are normal force (CN), pitching moment (CM, side force (CY), yawing moment (CYM), axial force, (CA), and rolling moment (CR). Each successive page is incremented for roll angle in 45 deg increments fro a roll angle range from 0 to 360 deg. The cycle is then repeated for the next Mach number. The Mach numbers in the data base are 0.4, 0.5, 0.55, 0.6, 0.7, 0.8, 0.9, 0.95, 1.05, 1.1, 1.2, 1.4, 1.96, 2.5, 3.0, and 3.48.

This report is presented in three parts:

Summary Report, LMSC-HREC TR D951500-1 Tabular Data, LMSC-HREC TR D951500-1A Graphical Data, LMSC-HREC TR D951500-1B

PRECEDING PAGE BLANK NOT FILMED

PAGE IT INTENTIONALLY BLANK

B-iii

CONTENTS

	Mach Number	Page
Normal Force (CN)	0.4 0.5 0.55 0.6 0.7 0.8 0.9 0.95 1.05 1.1 1.2 1.4 1.96 2.5	B-1 B-10 B-19 B-28 B-37 B-46 B-55 B-64 B-73 B-82 B-91 B-100 B-109 B-118
	3.0 3.48	B-127 B-136
Pitching Moment (CM)	0.4 0.5 0.55 0.6 0.7 0.8 0.9 0.95 1.05 1.1 1.2 1.4 1.96 2.5 3.0 3.48	B-145 B-154 B-163 B-172 B-181 B-190 B-199 B-208 B-217 B-226 B-235 R-244 B-253 B-262 B-271 B-280

PRECEDING PAGE BLANK NOT FILMED

PAGE IV INTENTIONALLY BLANK

		2 200
Side Force (CY)	0.4	B-289
	0.5	B-298
	0.55	B-307
	. 0.6	B-316
	0.7	B-325
	0.8	B-334
	0.9	B-343
	0.95	B-352
	1.05	B-361
	1.1	B-370
-	1.2	B-379
	1.4	в-388
	1.96	B-397
	2.5	B-406
	3.0	B-415
	3.48	B-424
Yawing Moment (CYM)	0.4	B-433
TAWITING HOMERIC (CITY)	0.5	B-442
	0.55	B-451
	0.6	B-460
. •	0.7	B-469
	0.8	B-478
	0.9	B-487
	0.95	B-496
	1.05	B-505
	1.1	B-514
	1.2	B-523
	1.4	B-532
		B-541
	1.96	B-550
	2.5	B-559
	3.0	
	3.48	В-568
45.3	0. /	B-577
Axial Force (CA)	0.4	B-586
	0.5	B-595
	0.55	B-604
	0.6	B-613
	0.7	B-622
	0.8	B-631
	0.9	B-640
	0.95	в-649
	1.05	
	1.1	B-658
	1.2	B-667
	1.4	B-676
	1.96	B-685
	2.5	B-694
	3.0	B-703
	3.48	B-712

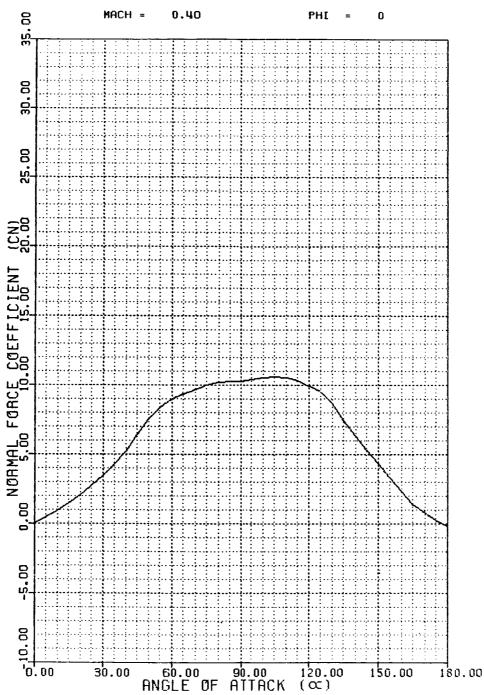
Rolling Mo	ment (CR)
------------	-----------

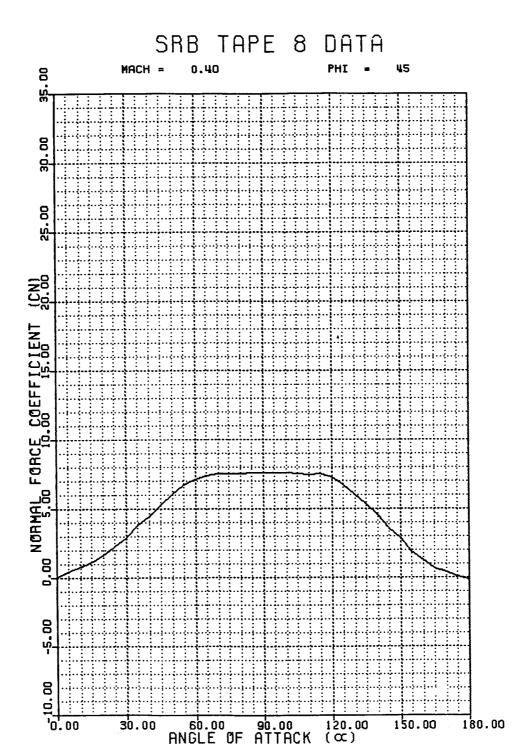
0.4	B-/21
0.5	B-730
0.55	B-739
0.6	B-748
0.7	B-757
0.8	B-766
0.9	B-775
0.95	B-784
1.05	B-793
1.1	B-802
1.2	B-811
1.4	B-820
1.96	B-829
2.5	B-838
3.0	B-847
3.48	B-856

NORMAL FORCE (CN)

Mach Number	Page
0.4	B-1
0.5	B-10
0.55	B-19
0.6	B-28
0.7	B-37
0.8	B-46
0.9	B-55
0.95	B-64
1.05	B-73
1.1	в-82
1.2	B-91
1.4	B-100
1.96	B-109
2.5	B-118
3.0	B-127
3.48	B-136



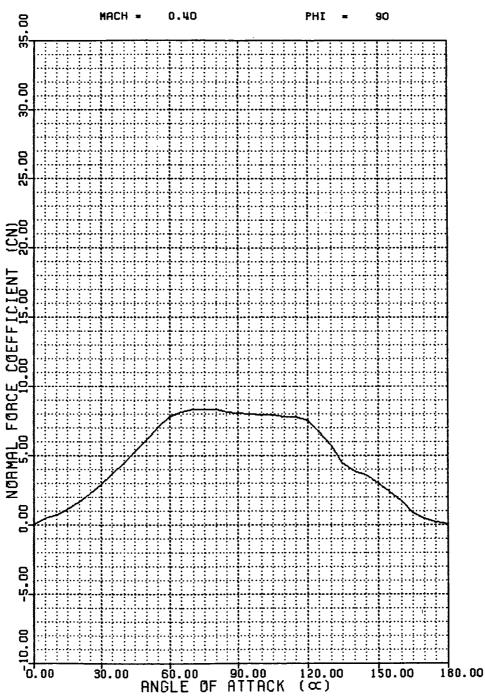




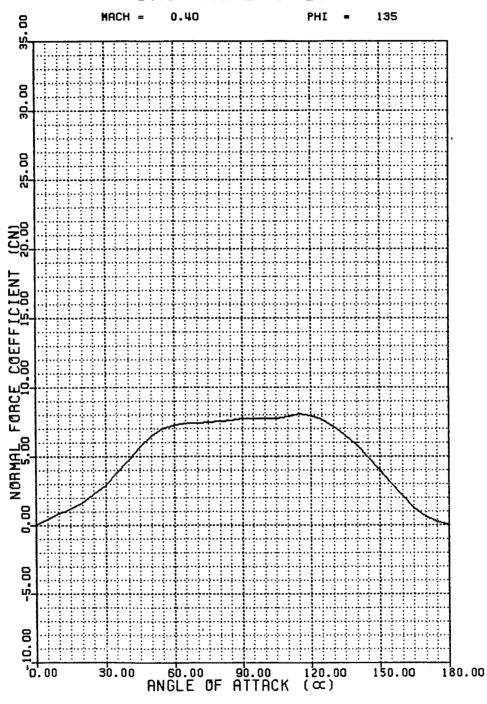
B-2

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

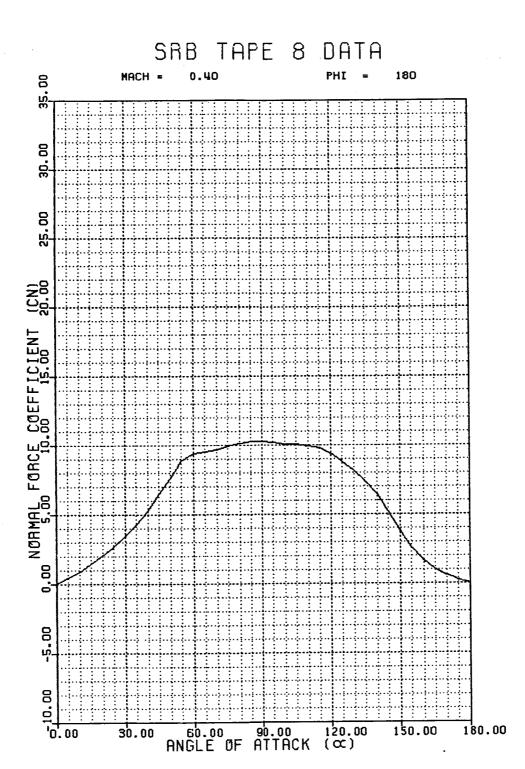


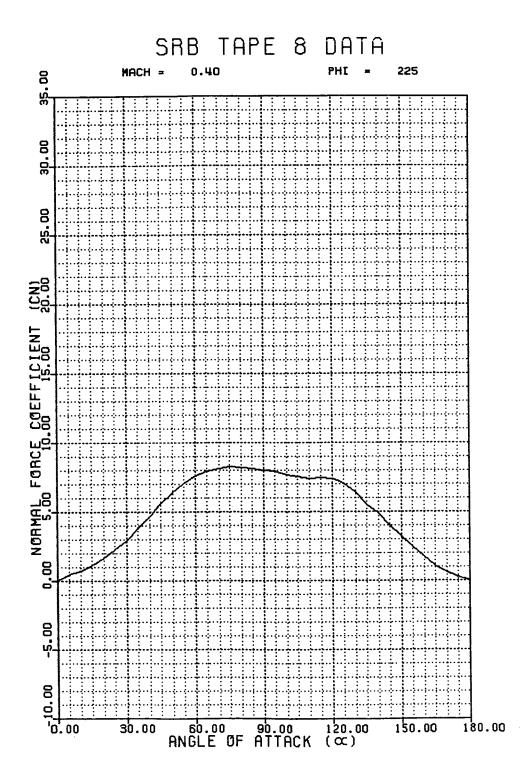


SRB TAPE 8 DATA



B-4

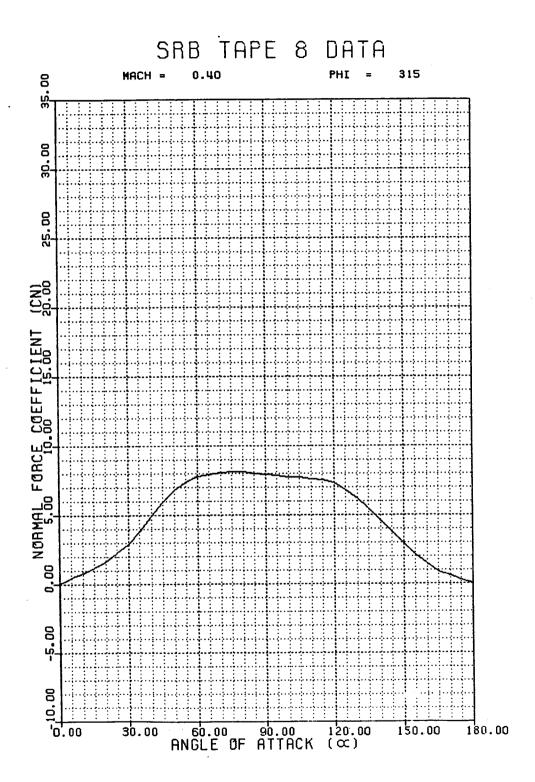




B-6

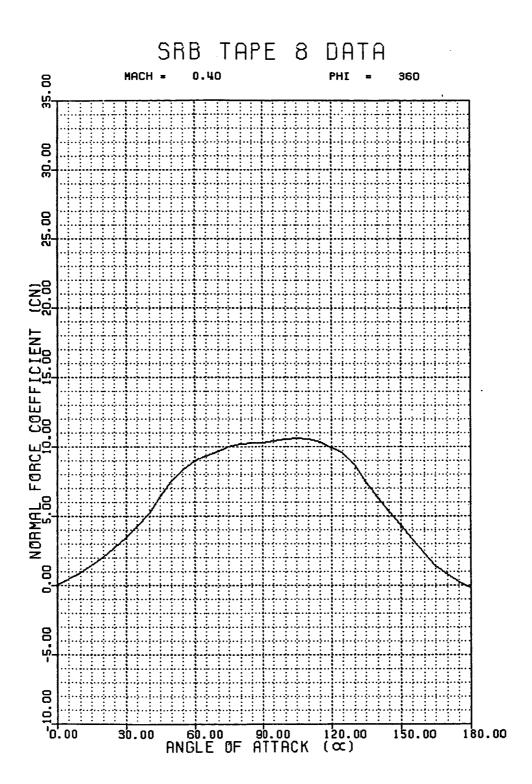
SRB TAPE 8 DATA 270 8 35. 30.00 25.00 0,00 NORMAL FORCE COEFFICIENT (CN) -5.00 0.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00 30.00

B-7



B-8

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

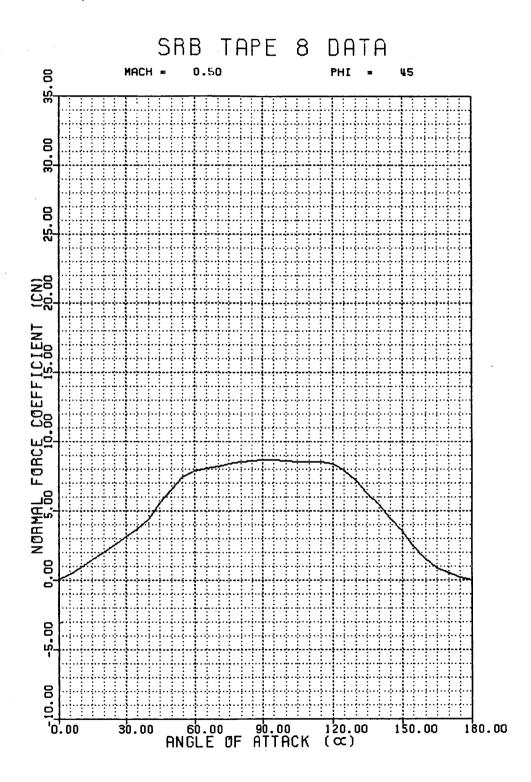


B-9

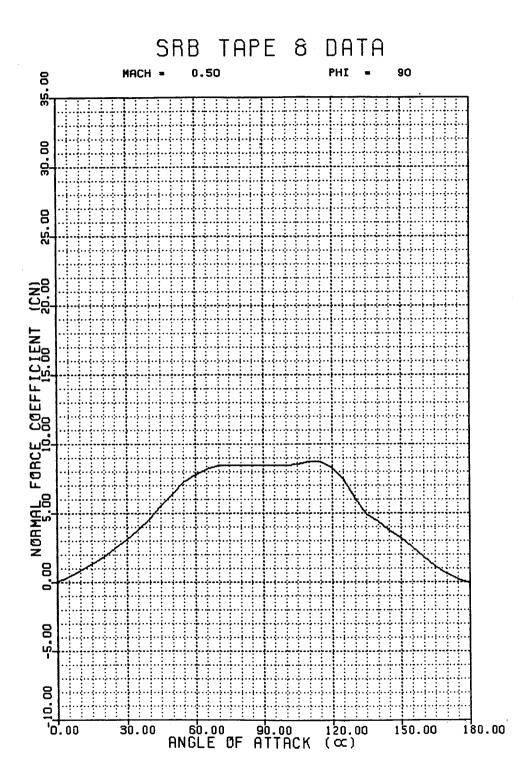
SRB TAPE 8 DATA 35.00 0.00 NORMAL FORCE COEFFICIENT (CN) 10.00 60.00 90.00 ANGLE OF ATTACK 30.00 180.00

B-10

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

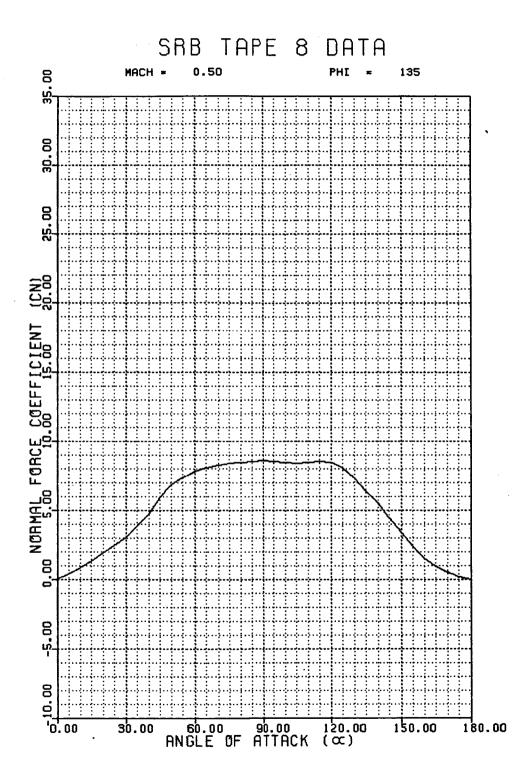


B-11

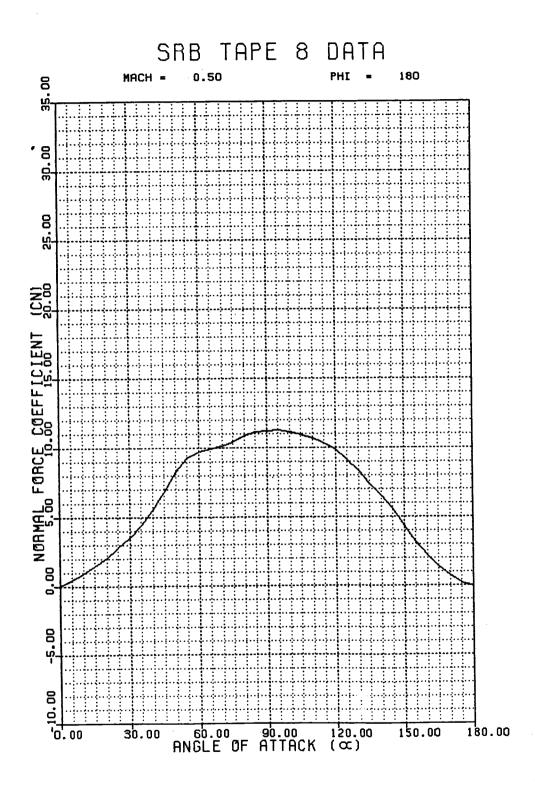


B-12

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

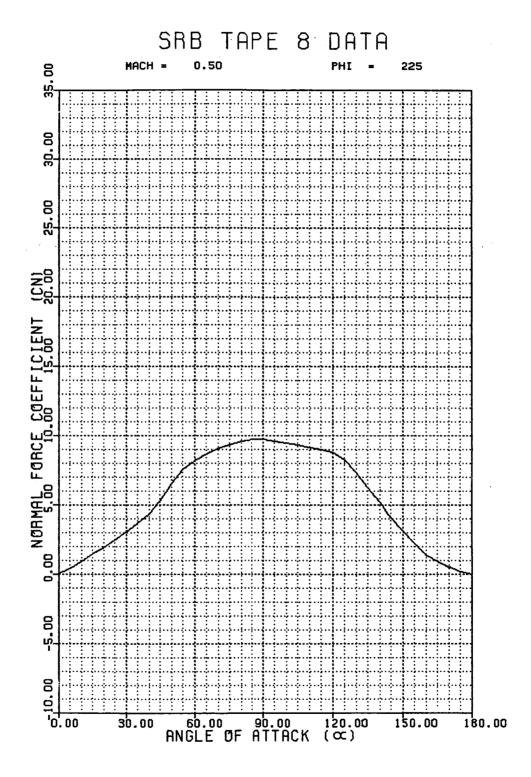


B-13

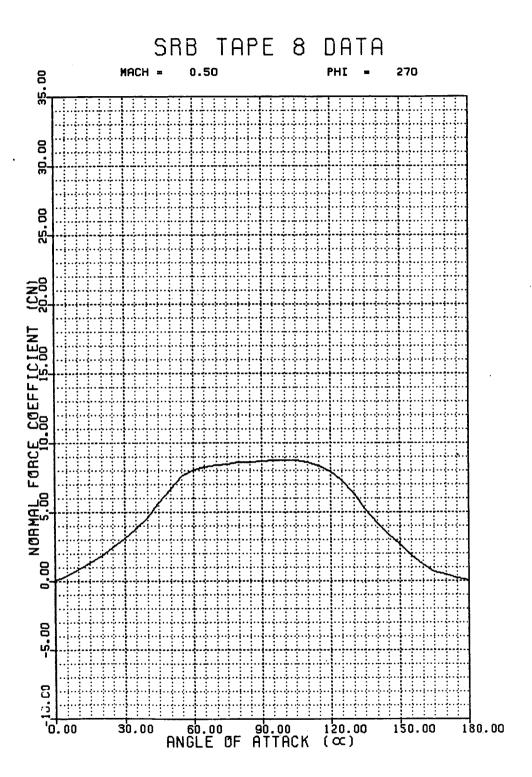


B-14

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

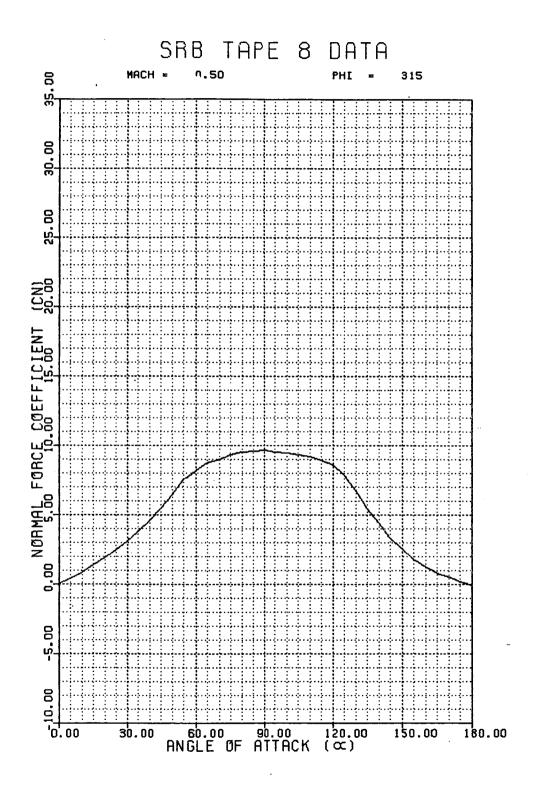


B-15
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

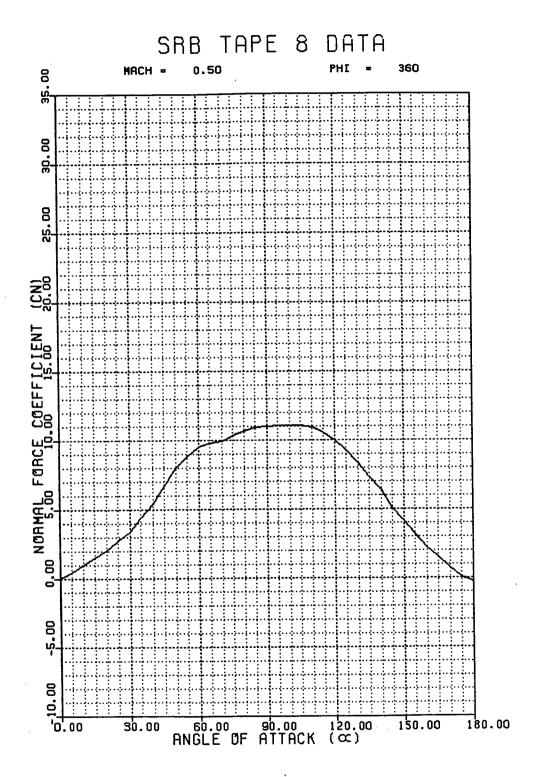


B-18

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

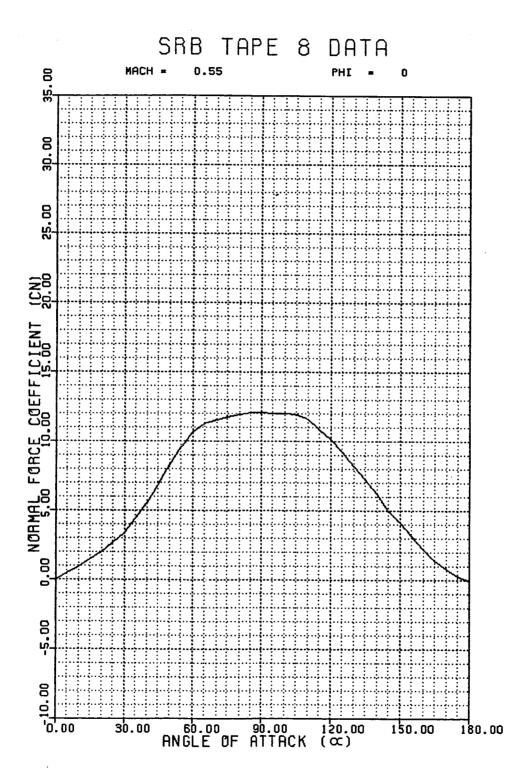


B-17

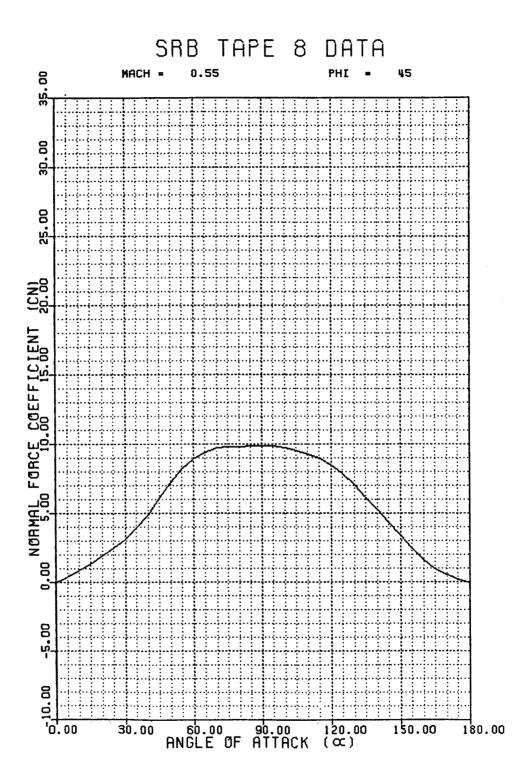


B-18

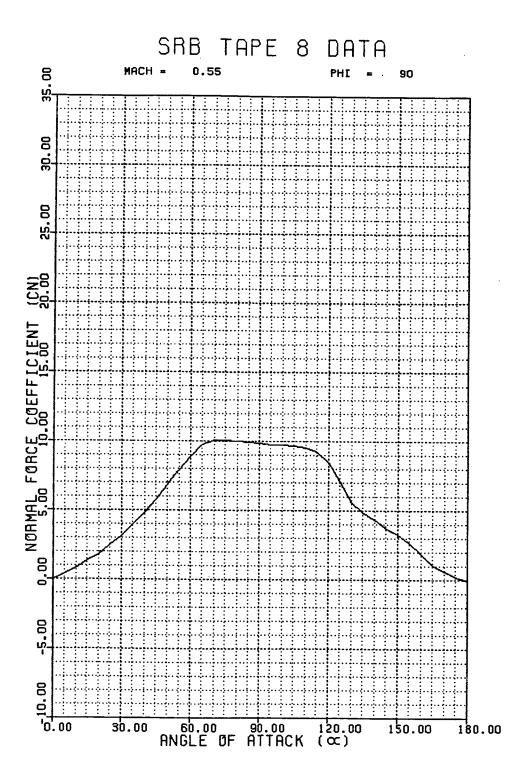
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



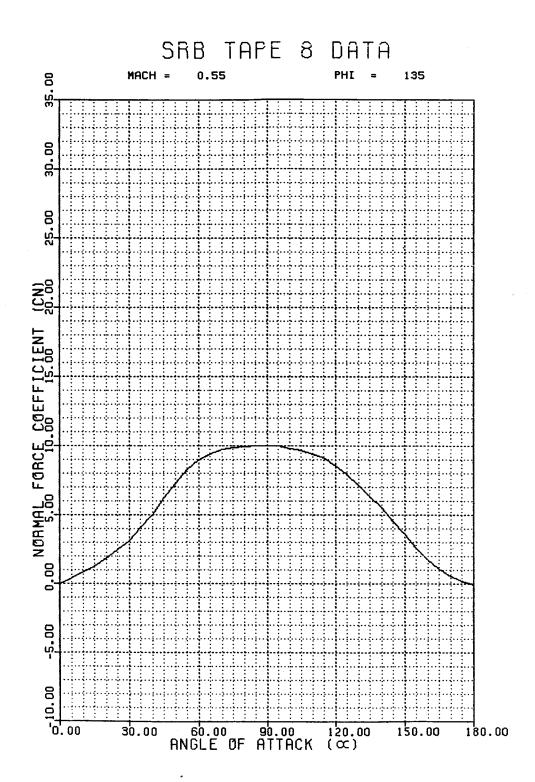
B-19



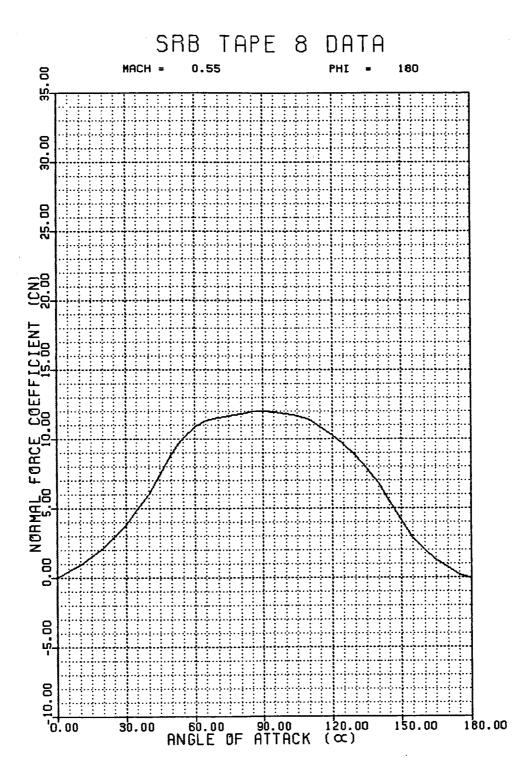
B-20
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



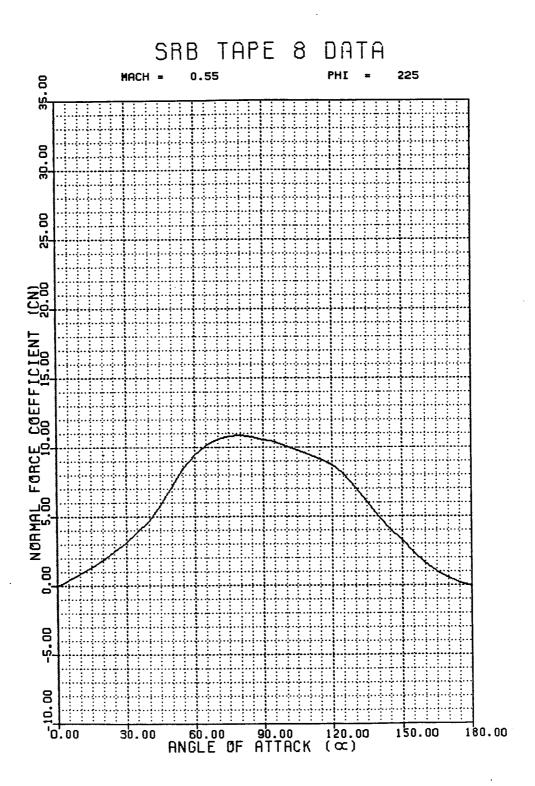
B-21



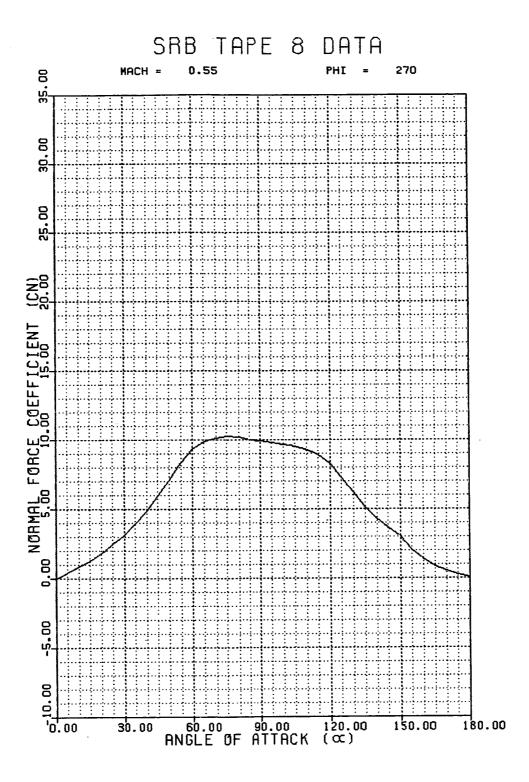
B-22
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



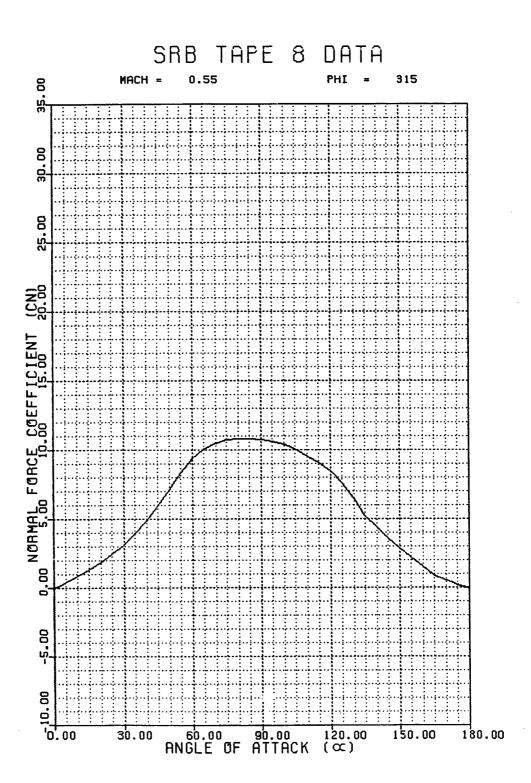
B-23



B-24
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-25

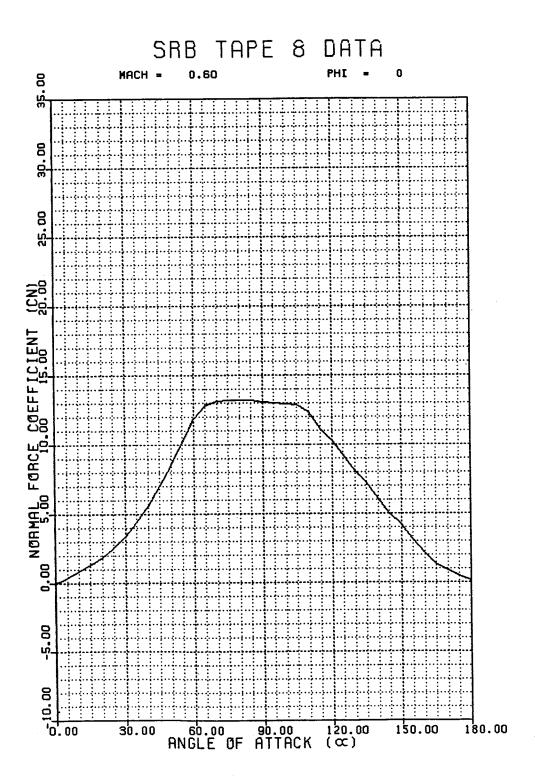


B-26

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

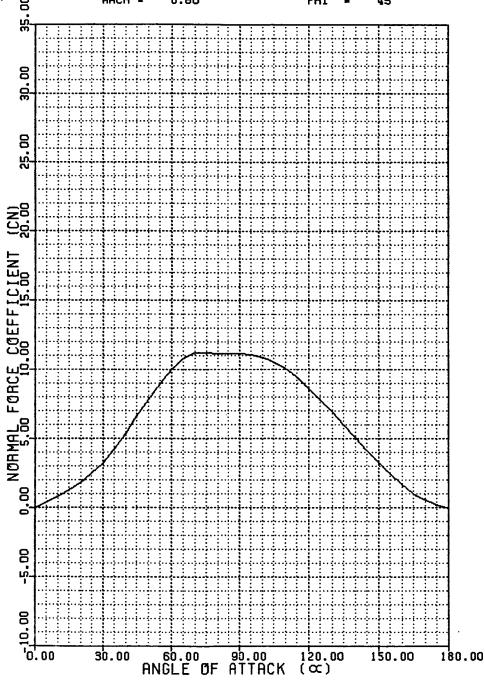
SRB TAPE 8 DATA 260 35.00 30.00 25.00 0,00 NORMAL FORCE COEFFICIENT (CN) 00.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

B-27
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

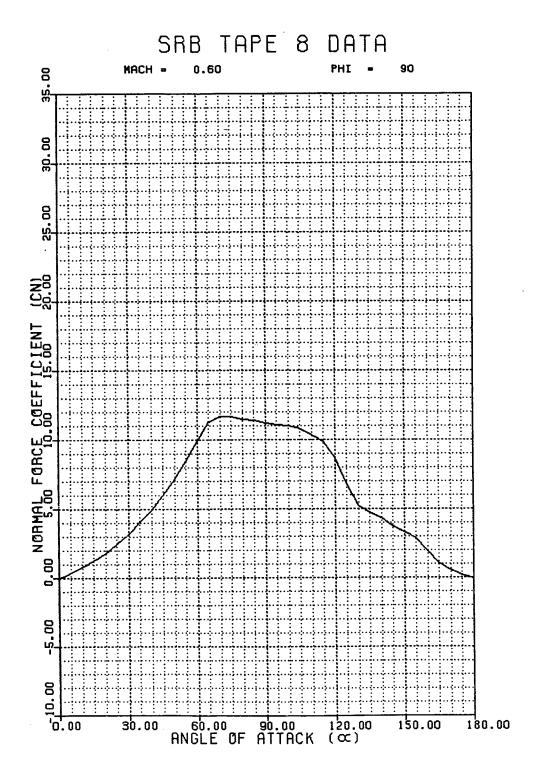


B-28
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

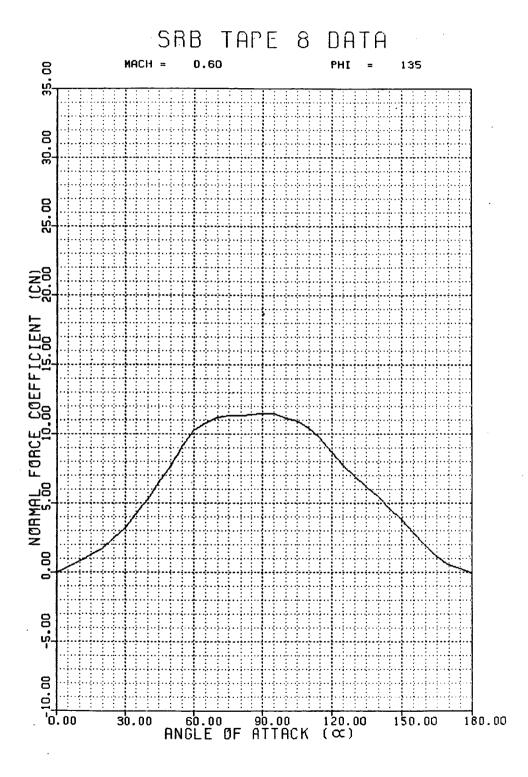
SRB TAPE 8 DATA



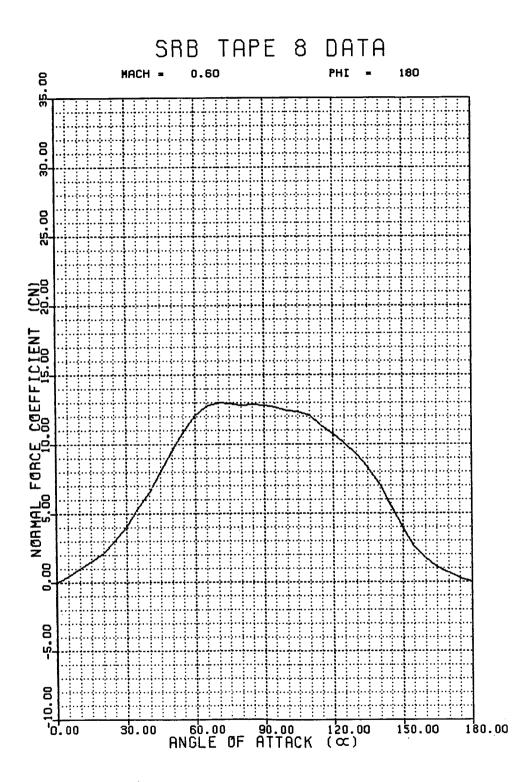
B-29



B-30
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-31
LÖCKHEED-HUNTSVILLE ENGINEERING CENTER



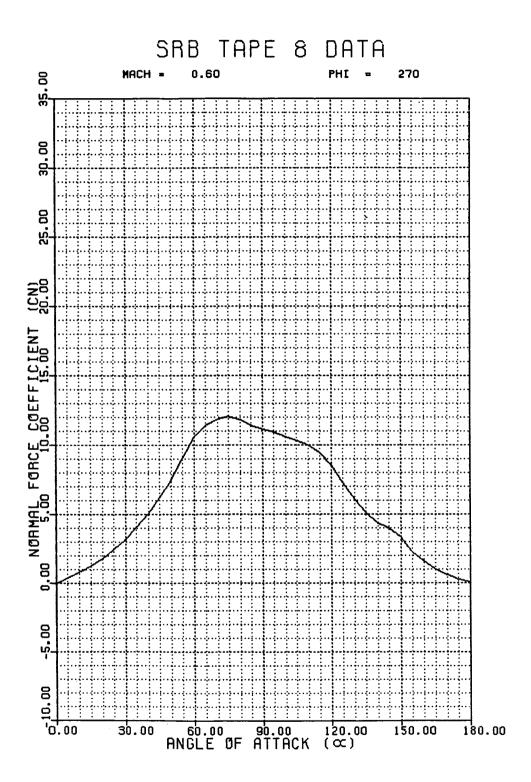
B-32
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

180.00

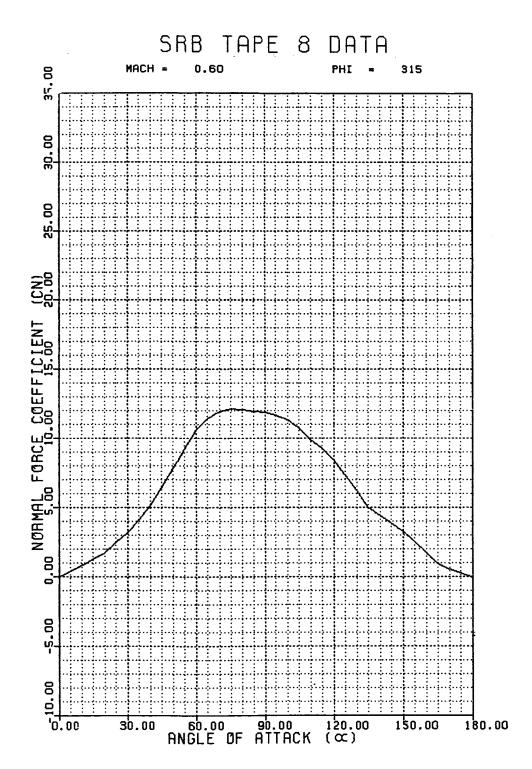
SRB TAPE 8 DATA MACH = 35.00 225 30°00 25.00 0,00 NORMAL FORCE COEFFICIENT (CN) -5.00 0.00

B-33

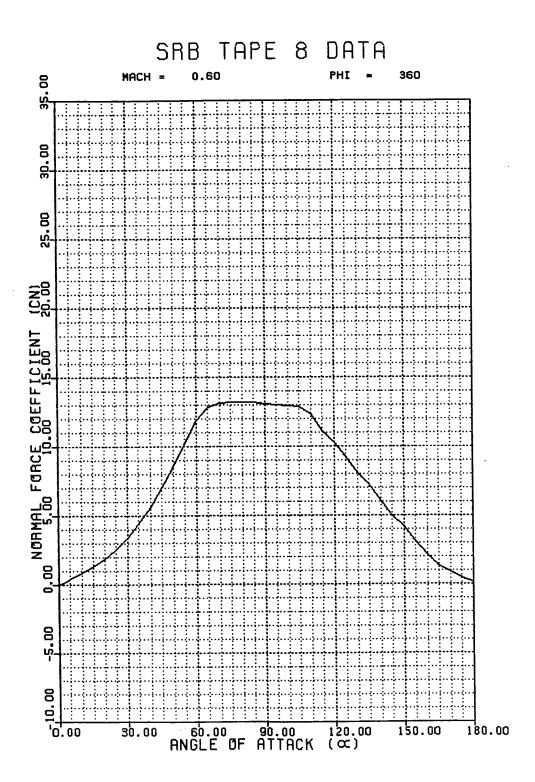
60.00 90.00 120.00 ANGLE OF ATTACK (⊄)



B-34
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

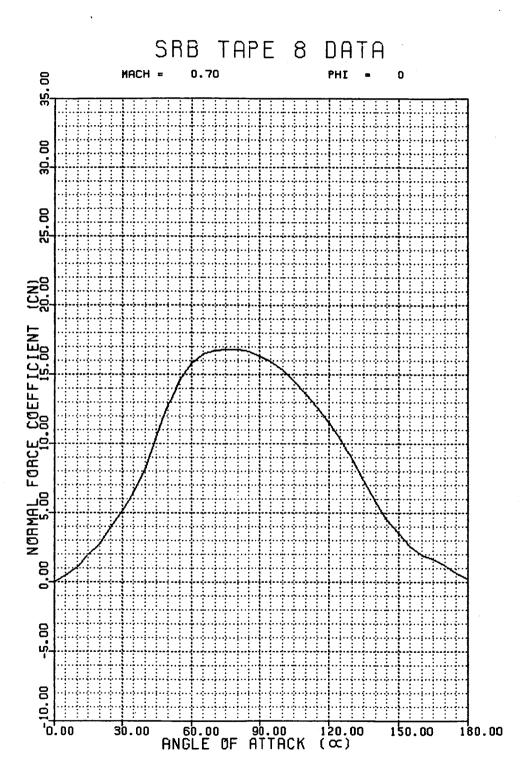


B-35

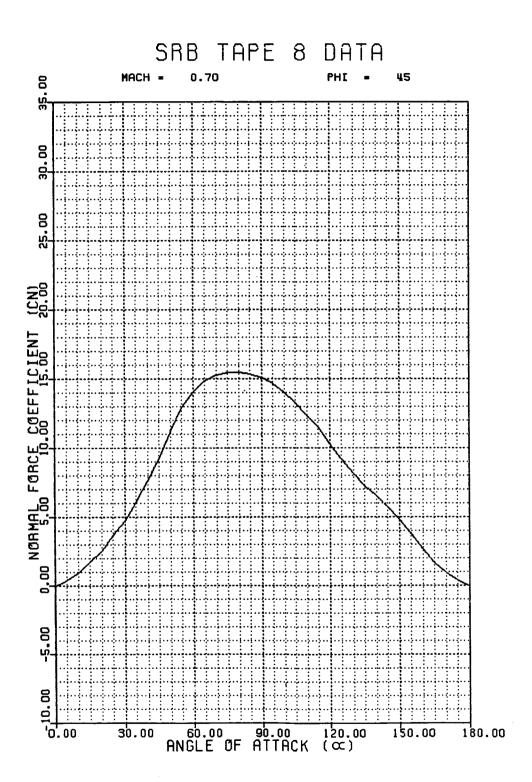


B-36

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

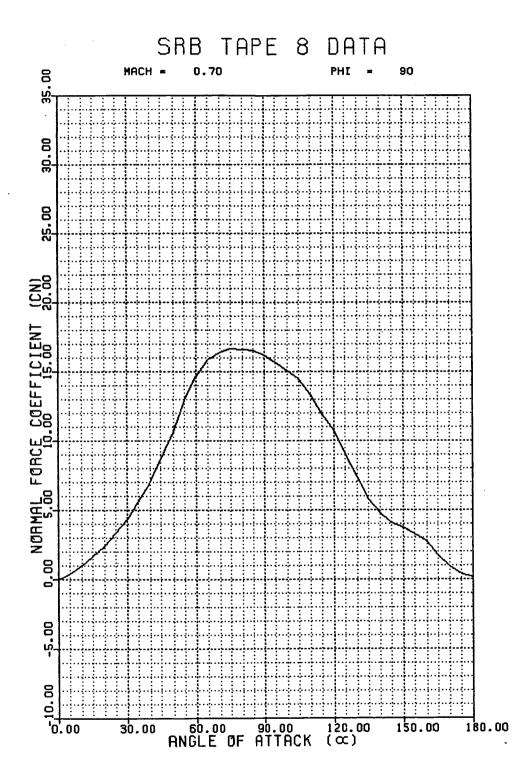


B-97



B-98

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

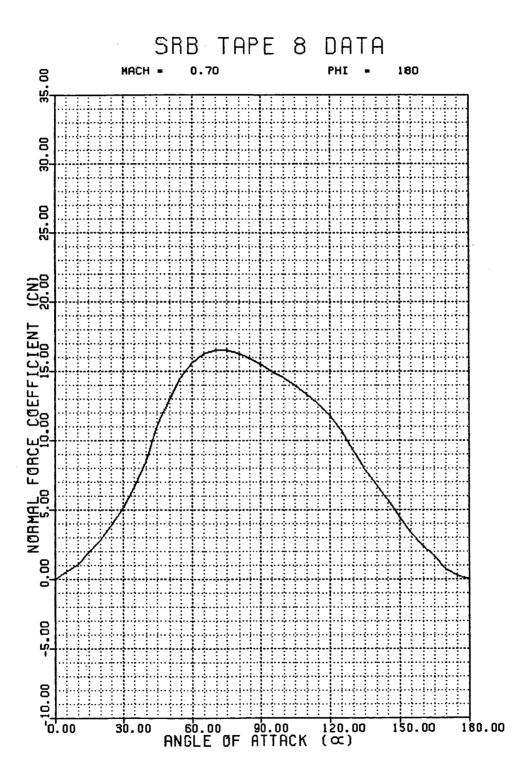


B-39

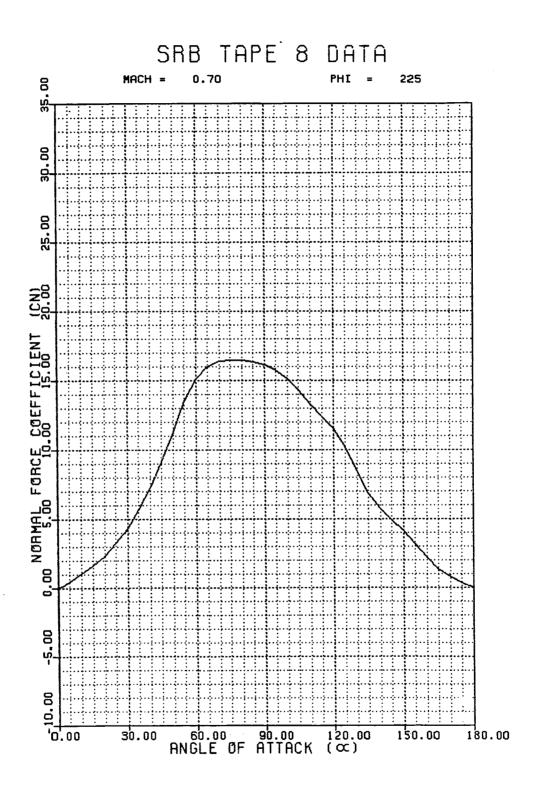
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 135 35.00 30.00 O,00 NORMAL FORCE COEFFICIENT -5.00 00.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00 30.00

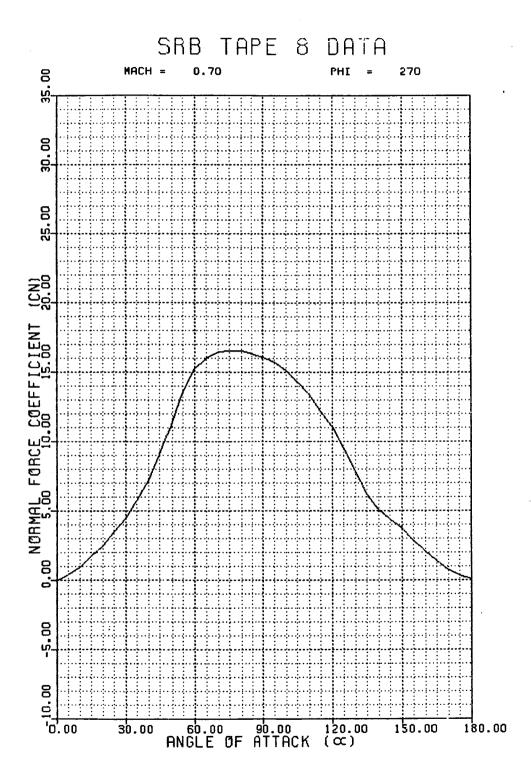
B-40
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



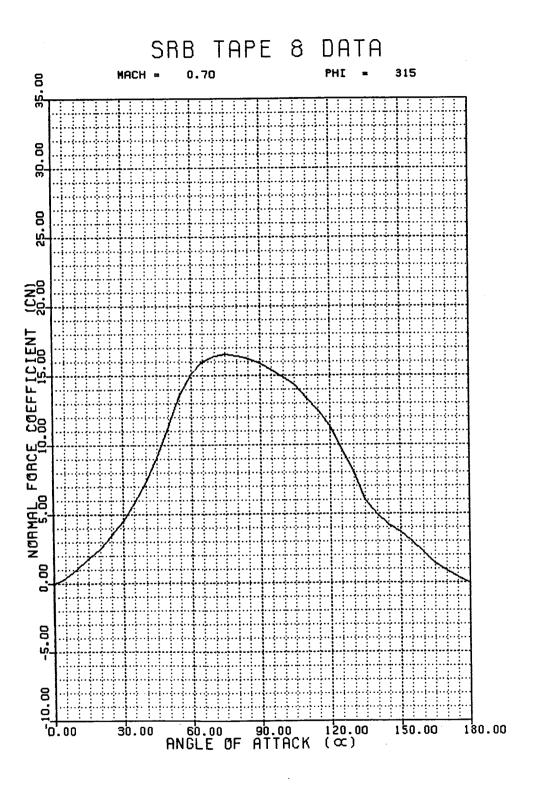
B-41
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-42
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

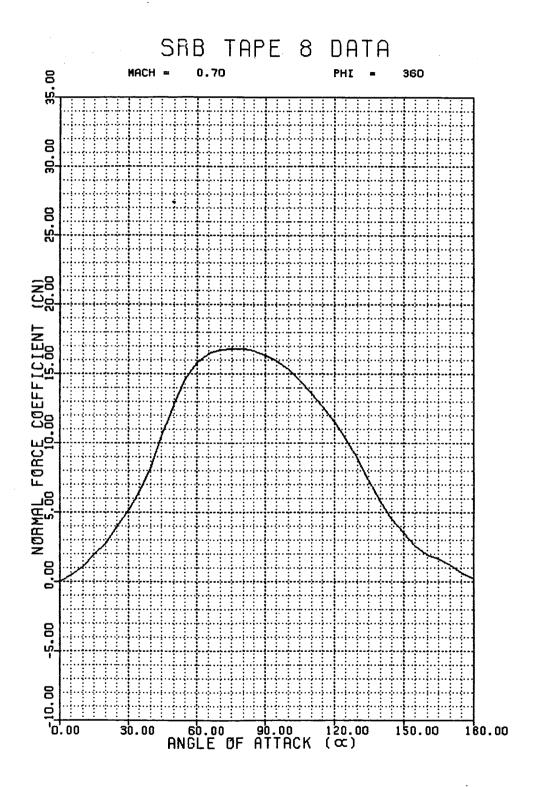


B-43
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

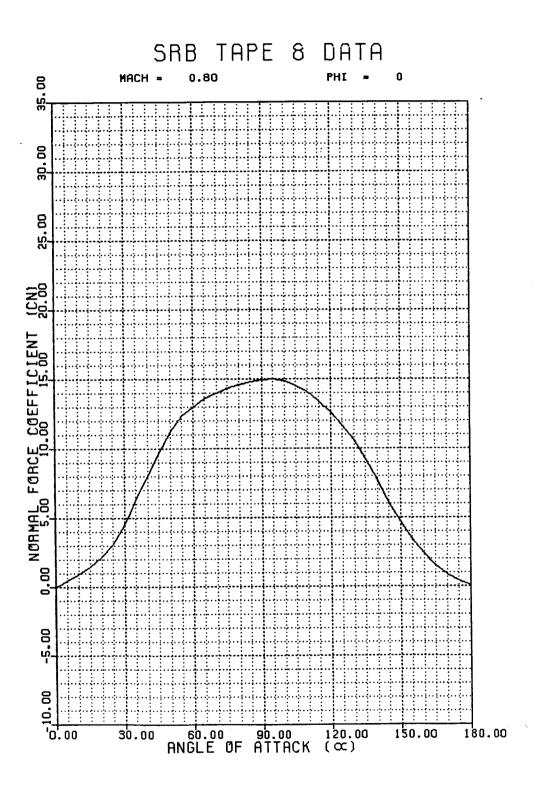


B-44

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

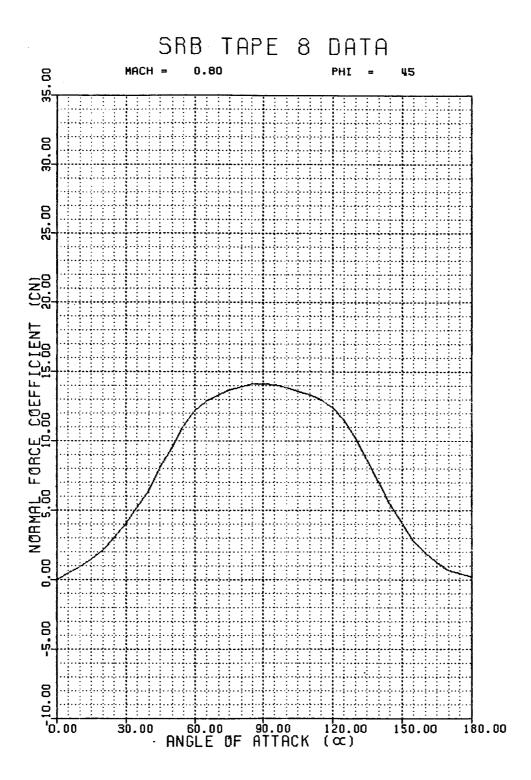


B-45
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

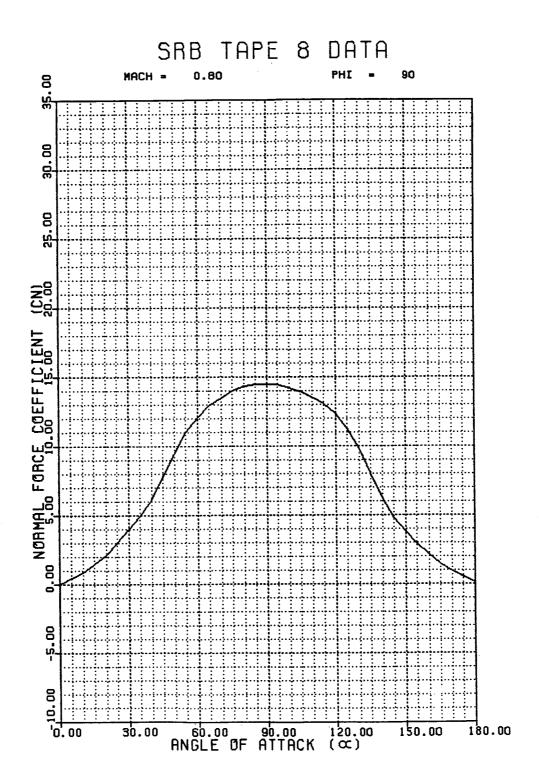


B-46

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

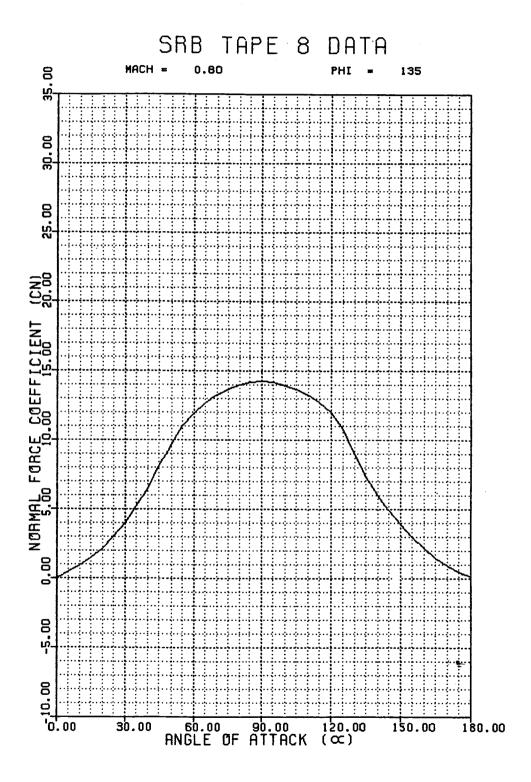


B-47
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

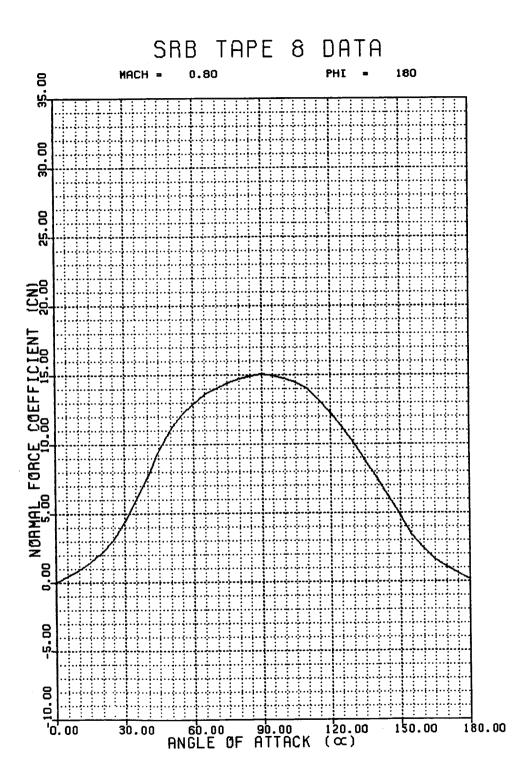


B-48

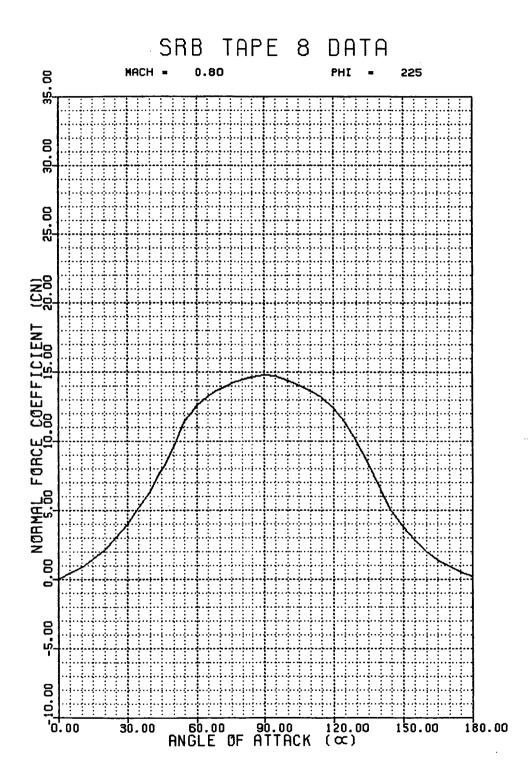
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



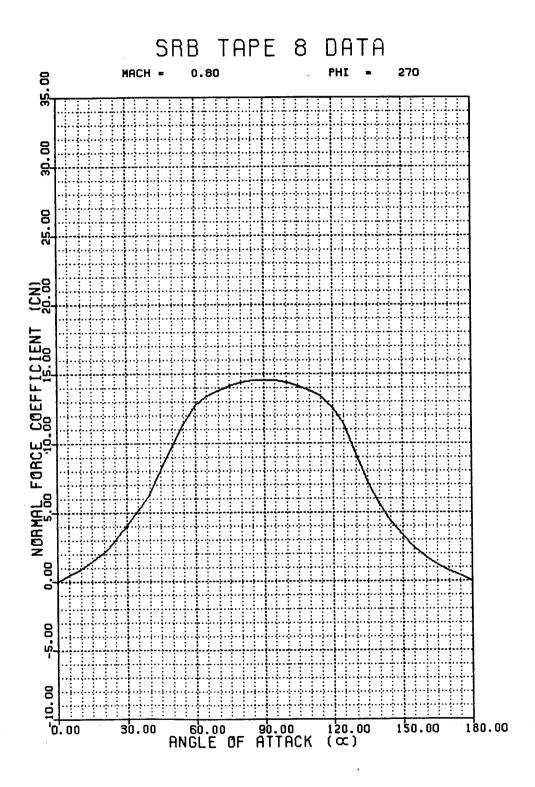
B-49
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



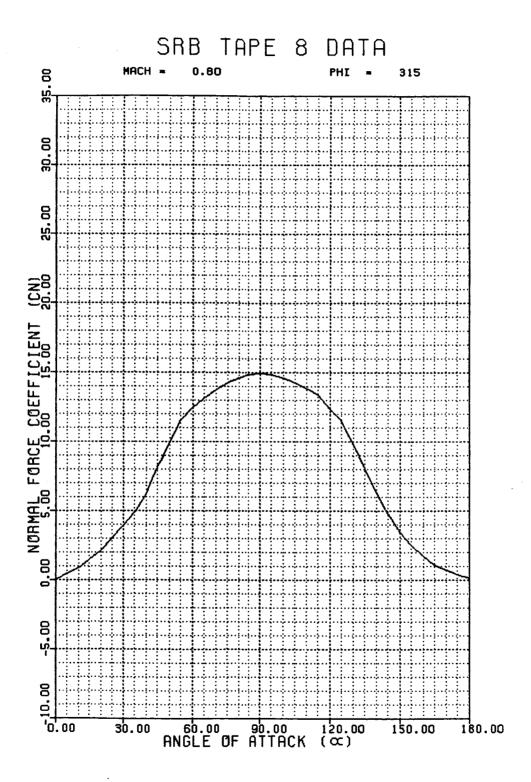
B-50
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



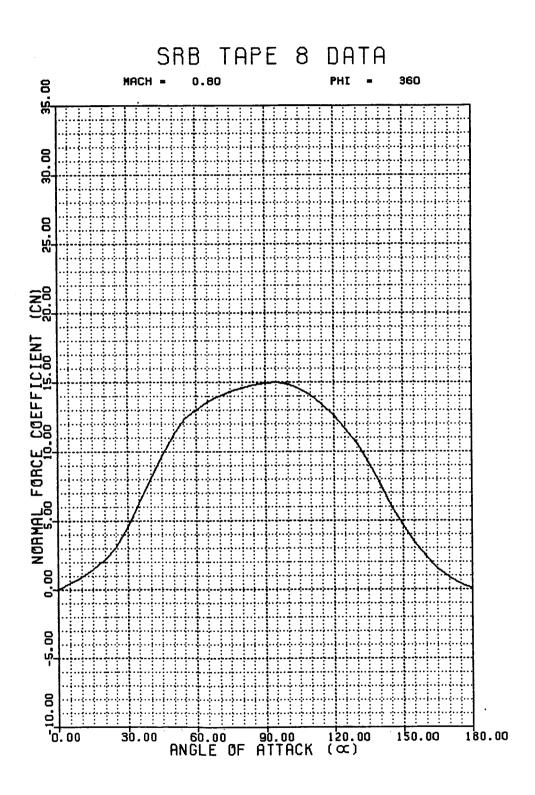
B-51



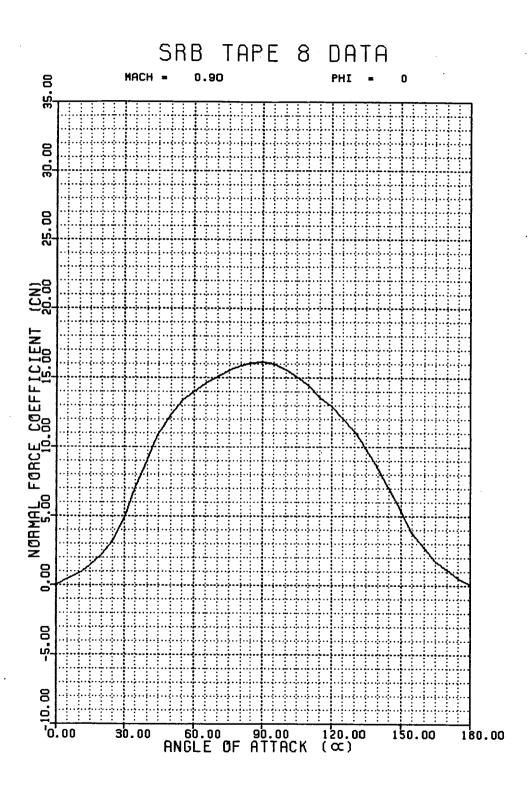
B-52
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



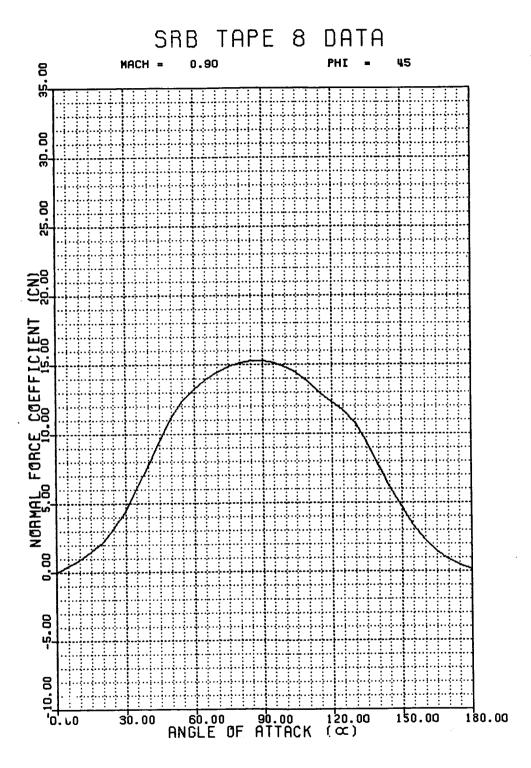
B-53



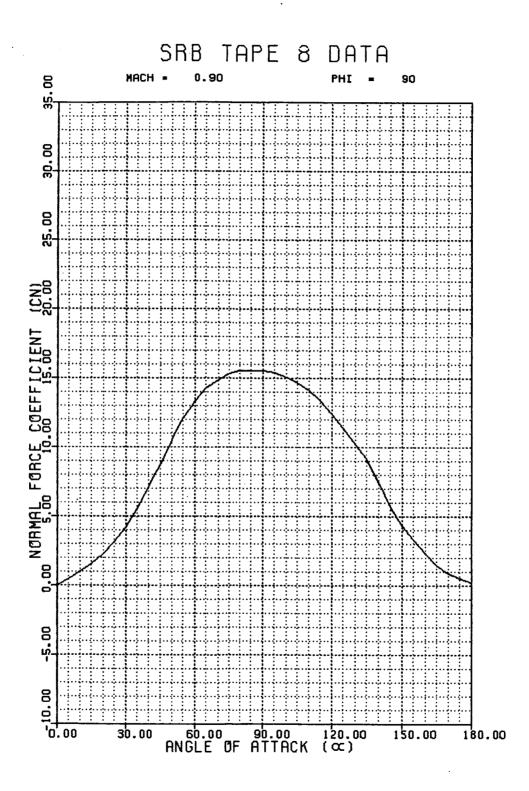
B-54
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



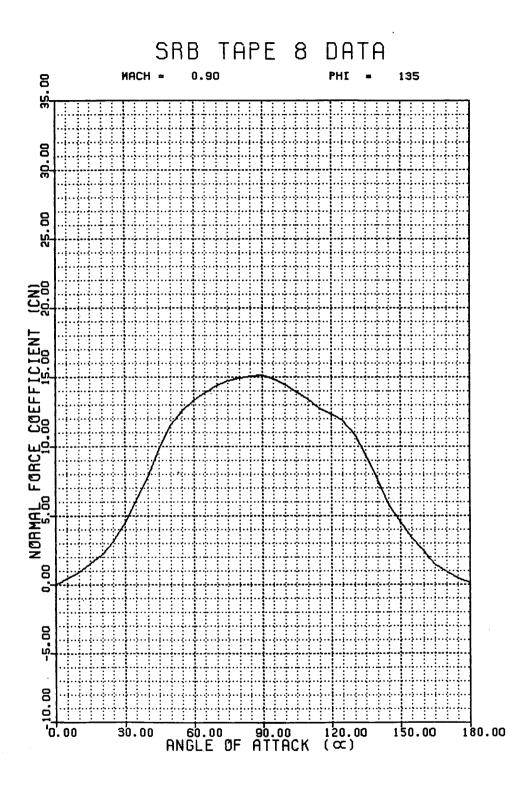
B-55



B-58
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

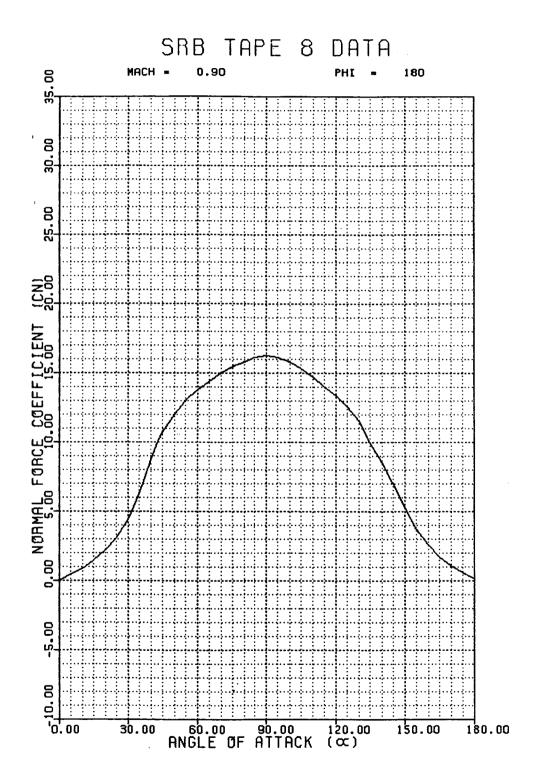


B-57
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

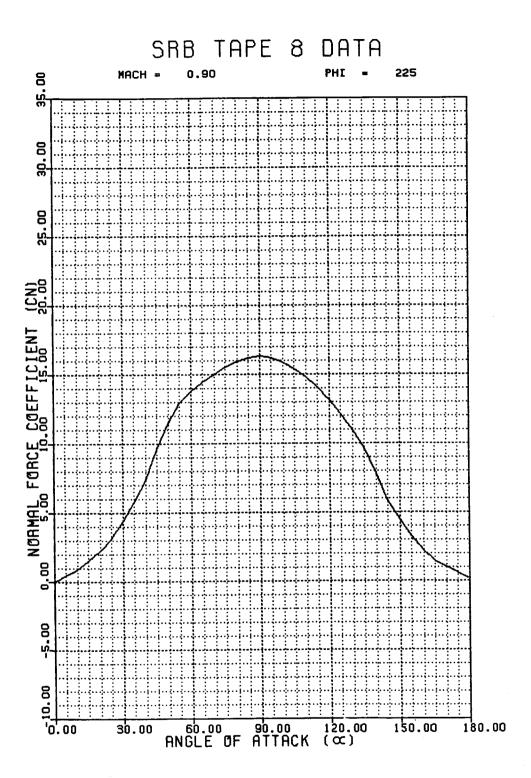


B-58

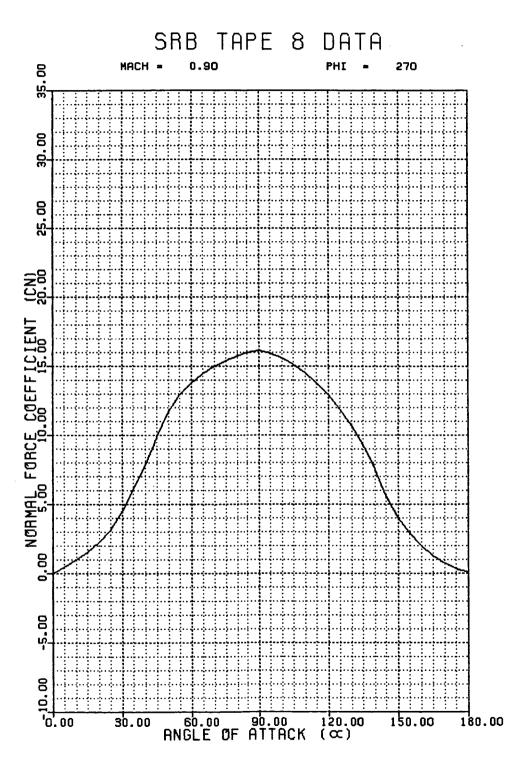
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



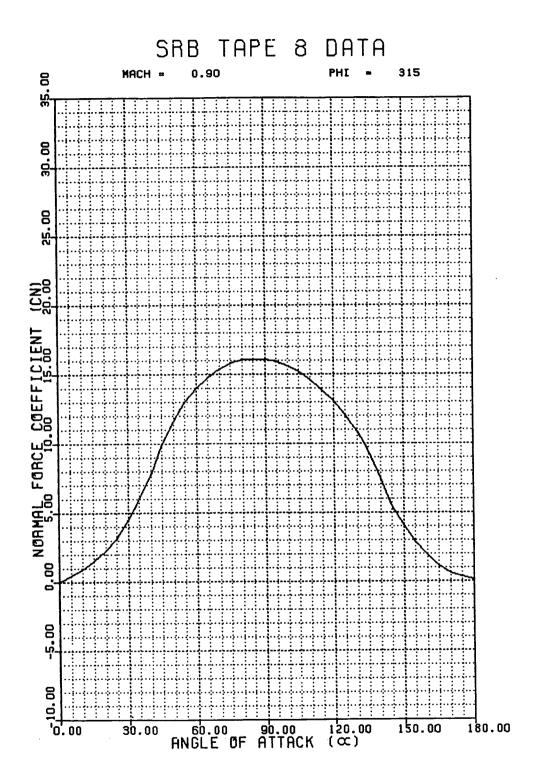
B-59



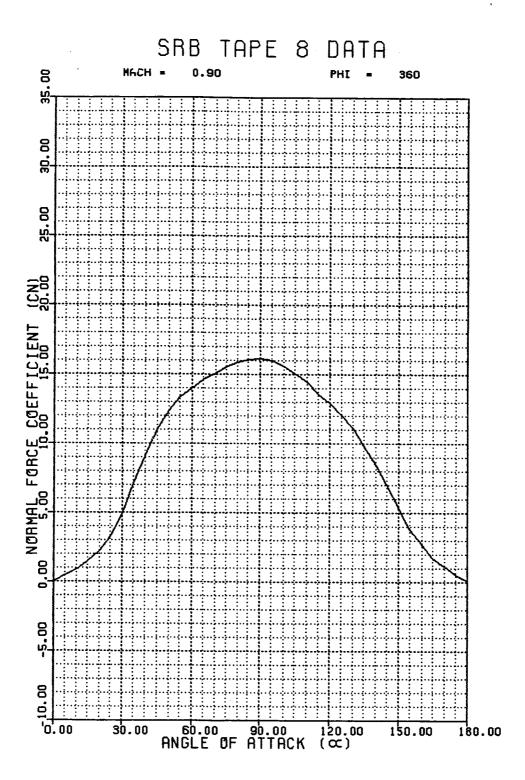
B-60
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



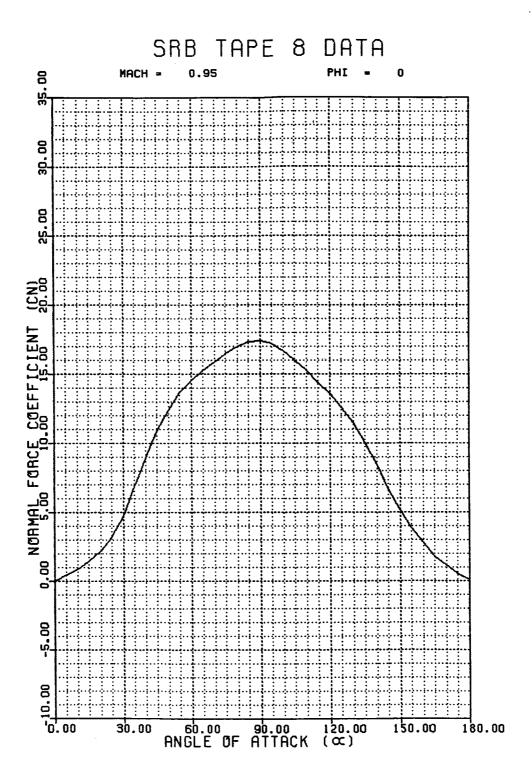
B-61



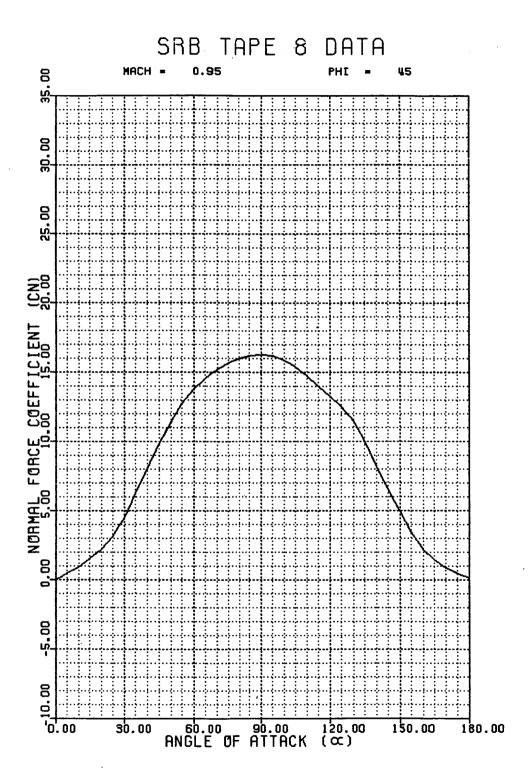
B-62
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



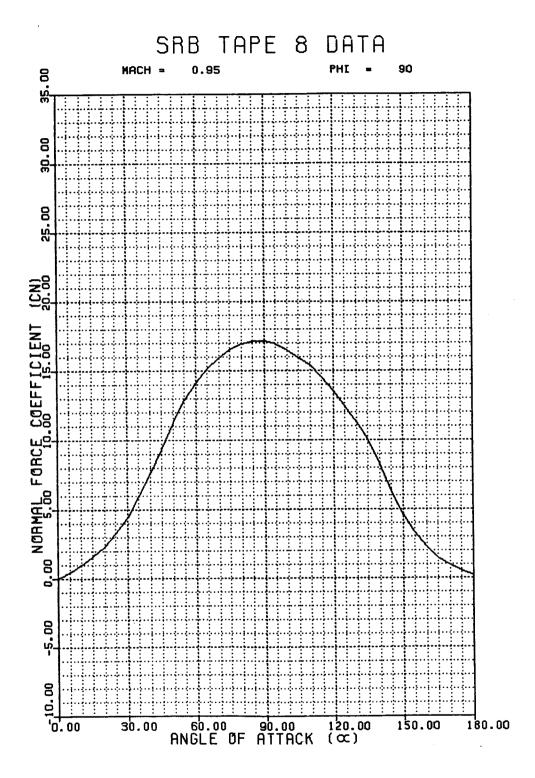
B-63



B-84
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

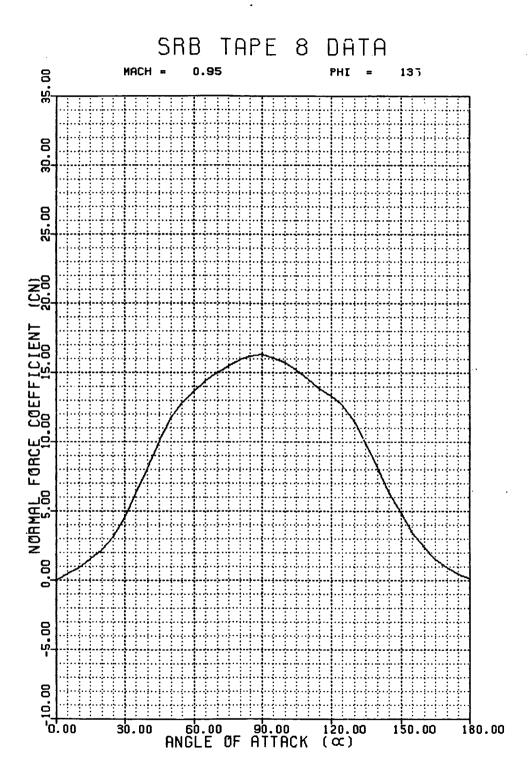


B-65

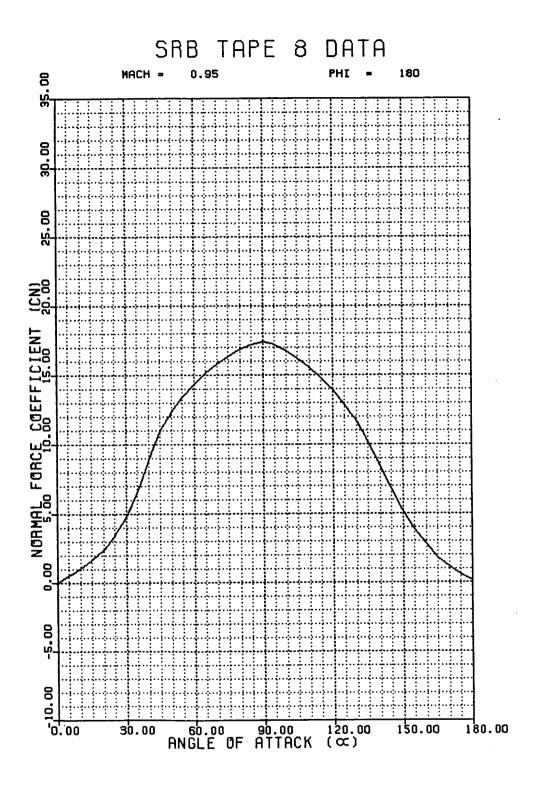


B-88

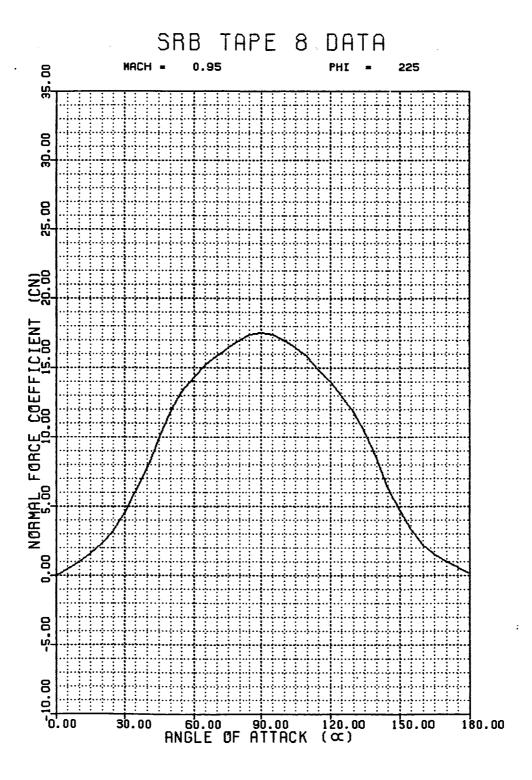
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



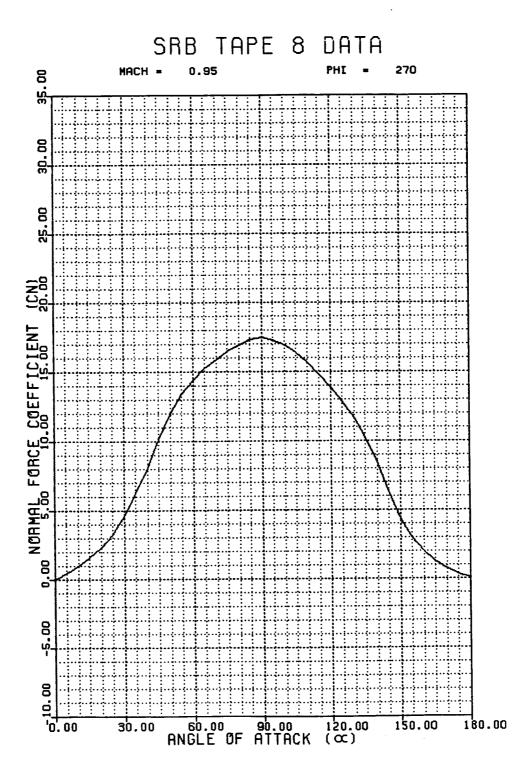
B-67



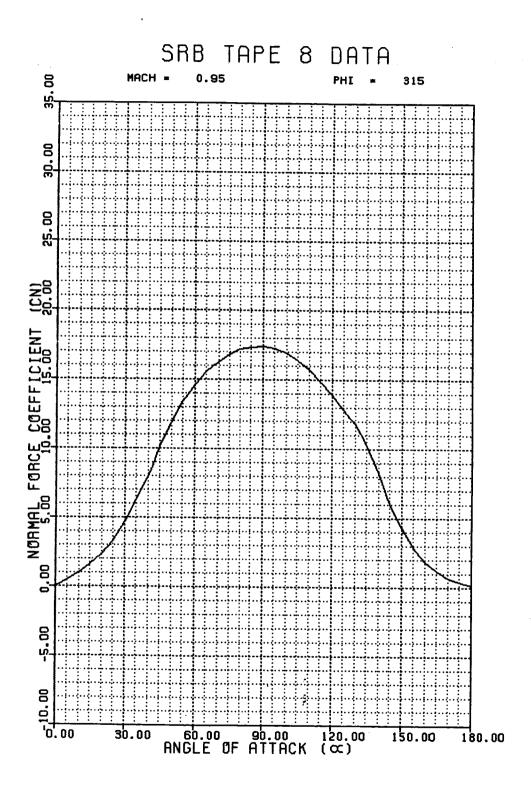
B-88
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



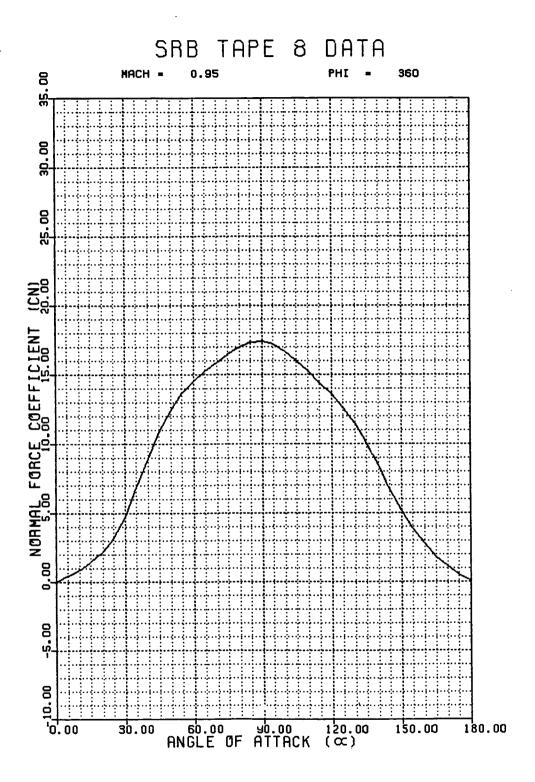
B-69
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-70
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

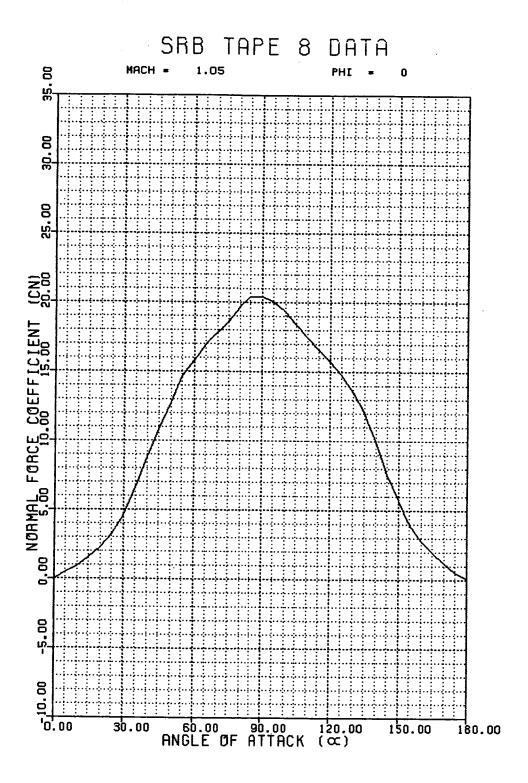


B-71

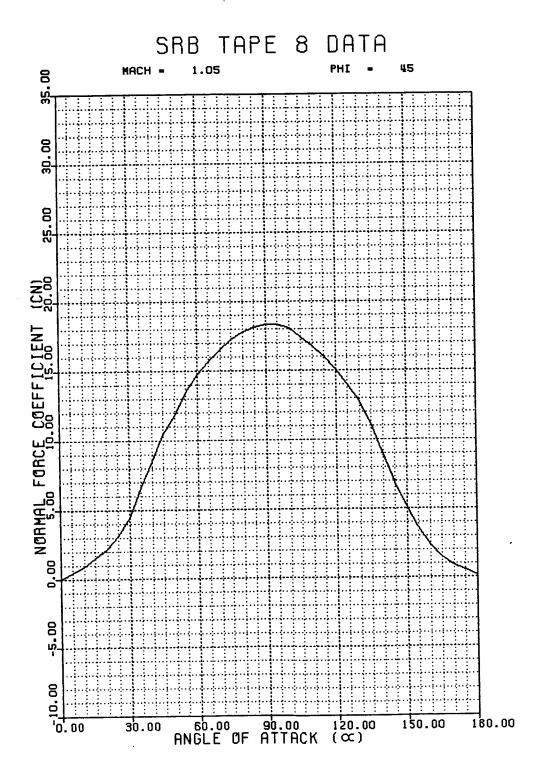


B-72

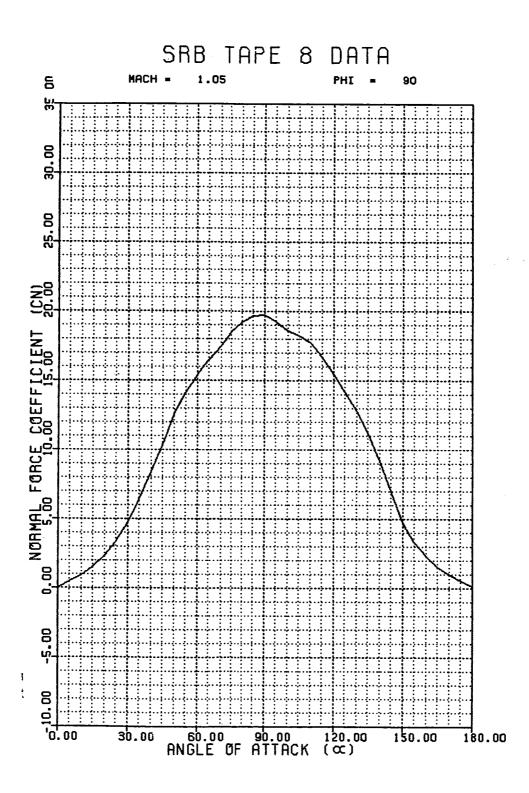
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



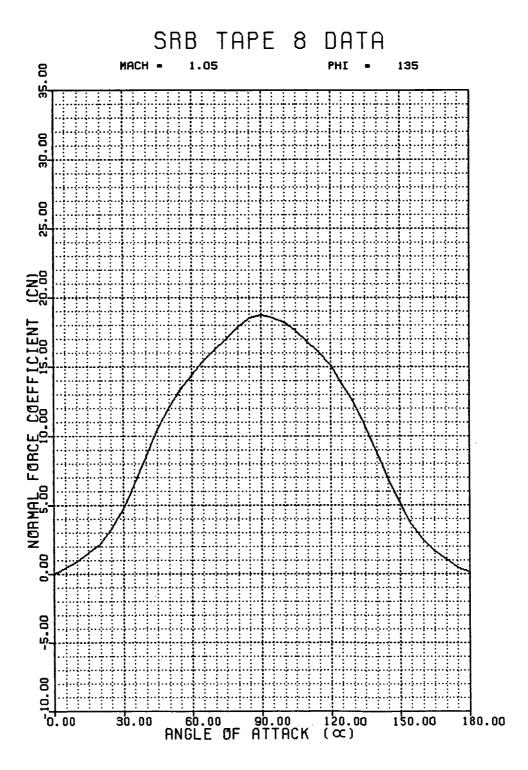
B-73



B-74
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

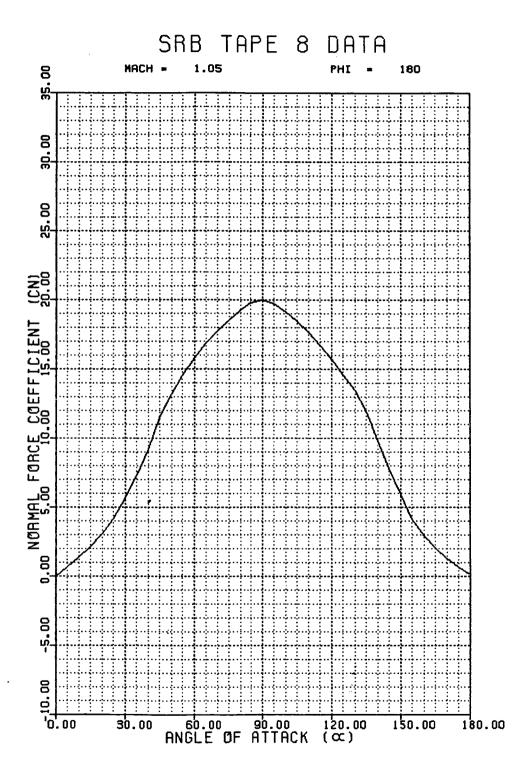


B-75
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

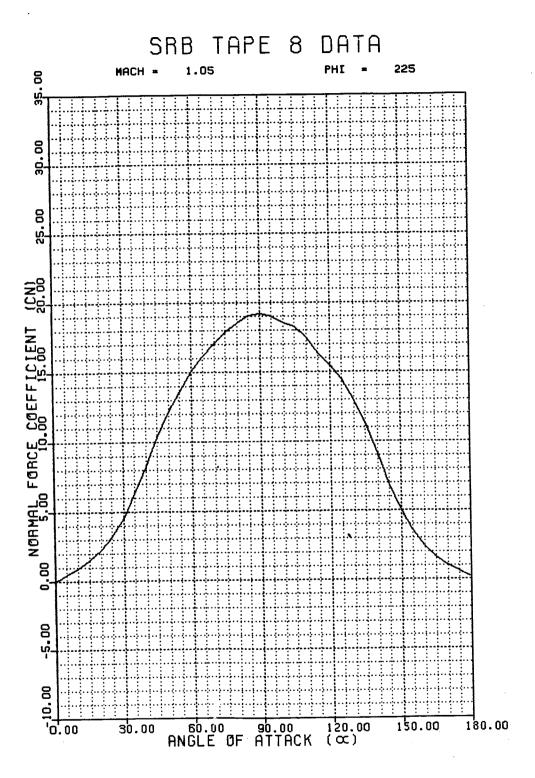


B-78

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

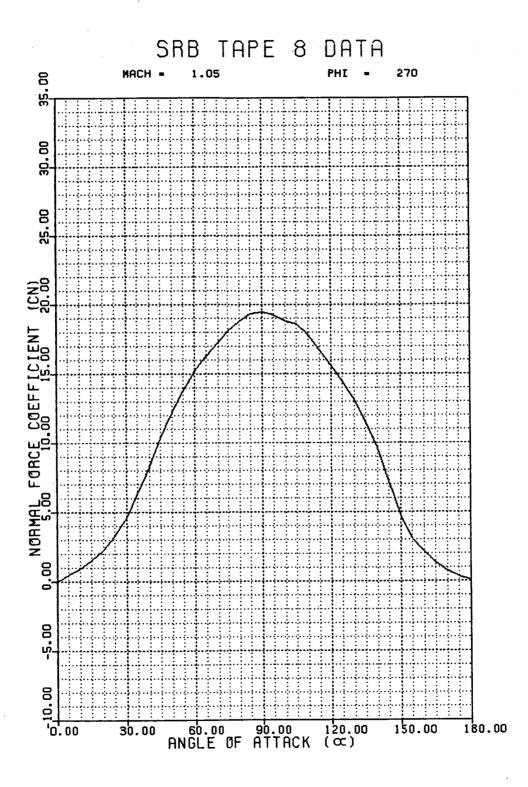


B-77

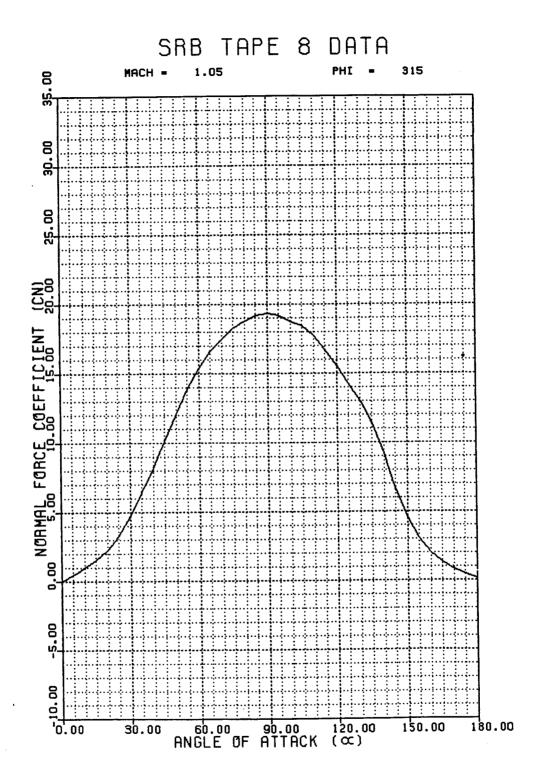


B-78

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

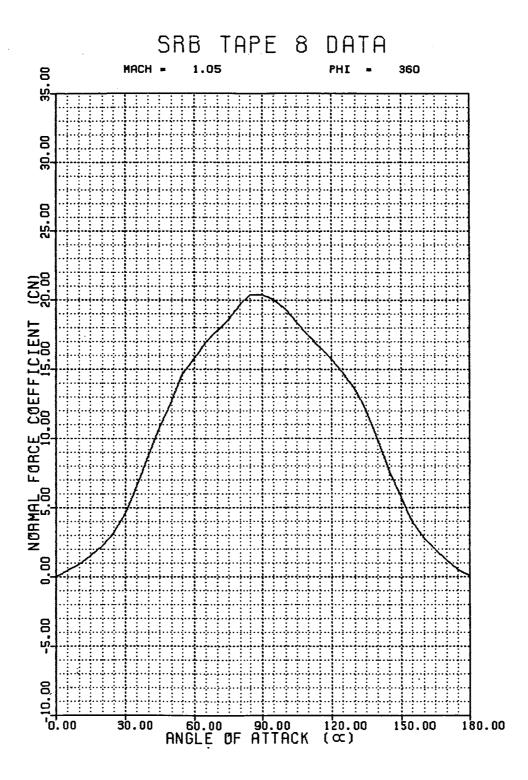


B-79

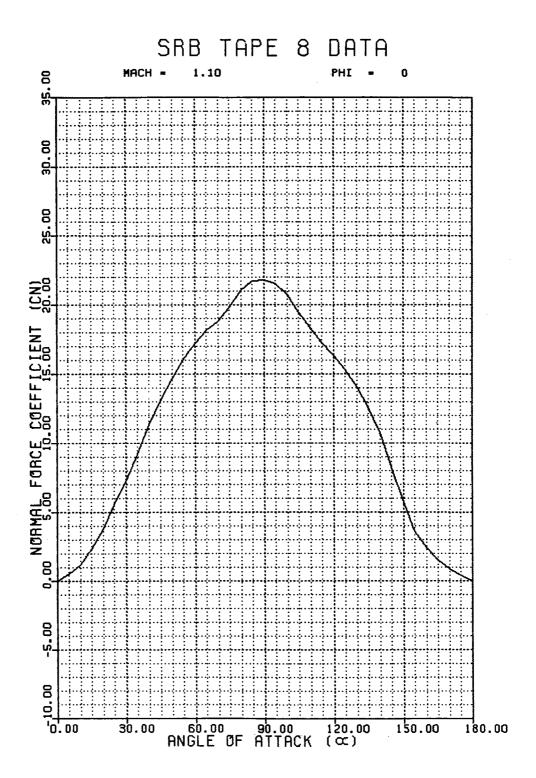


B-80

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

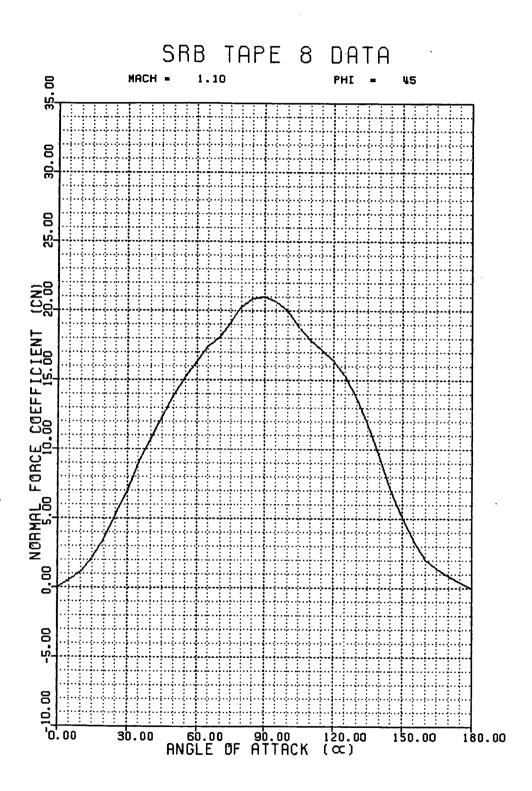


B-81
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

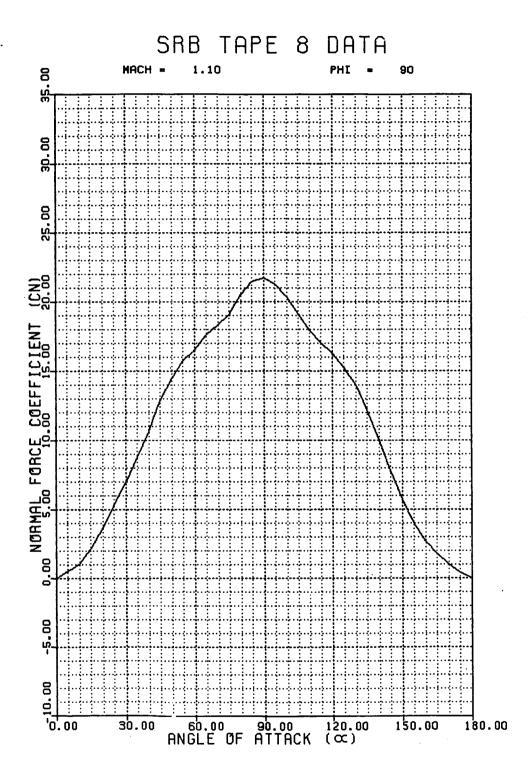


B-82

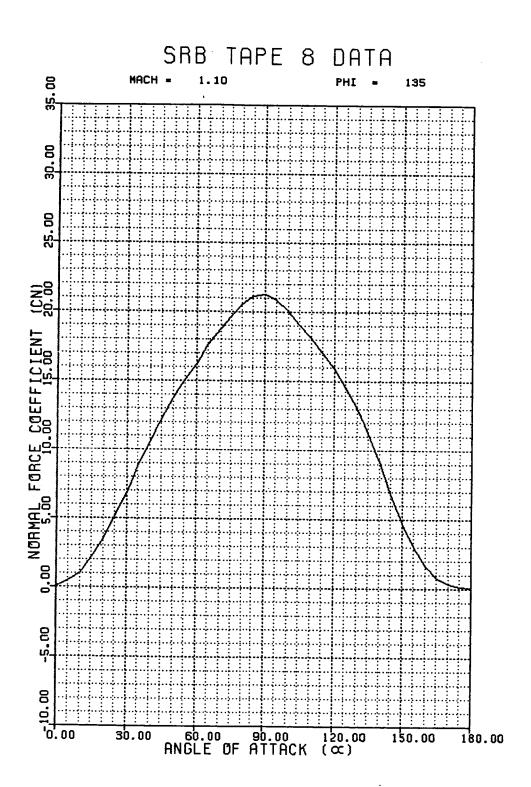
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



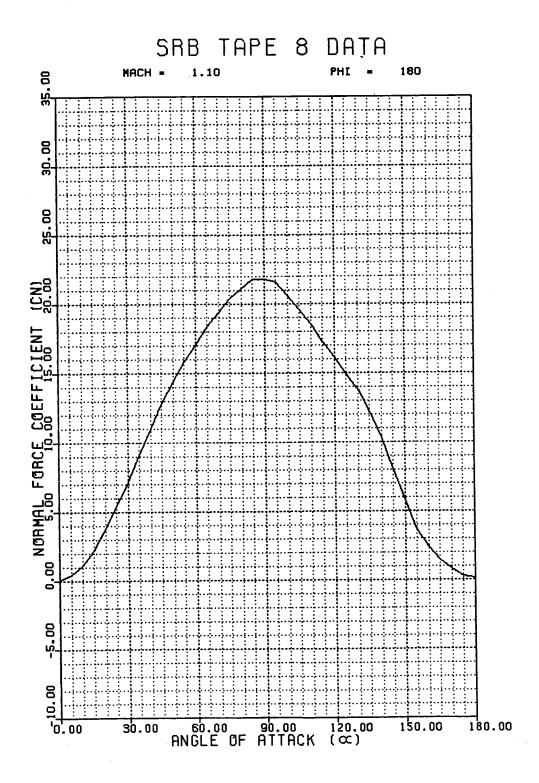
B-89
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-84
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



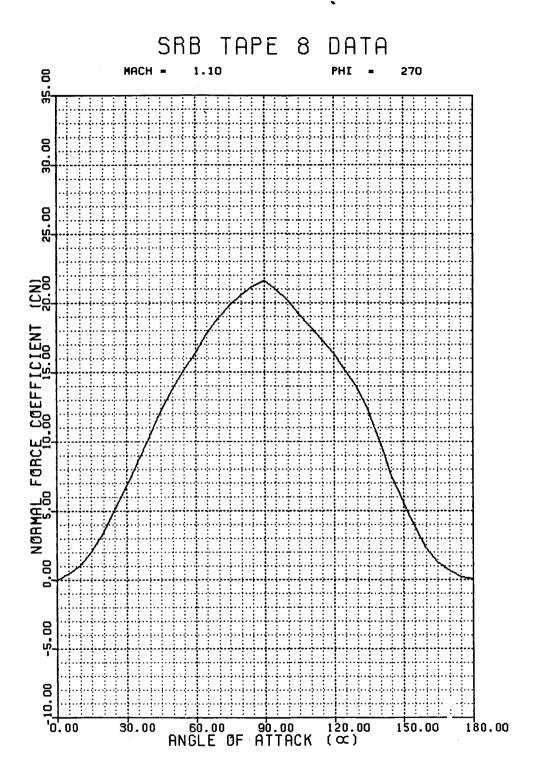
B-85



B-86
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 35.00 225 30.00 25.00 NORMAL FORCE COEFFICIENT (CN) -5.00 00.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 180.00

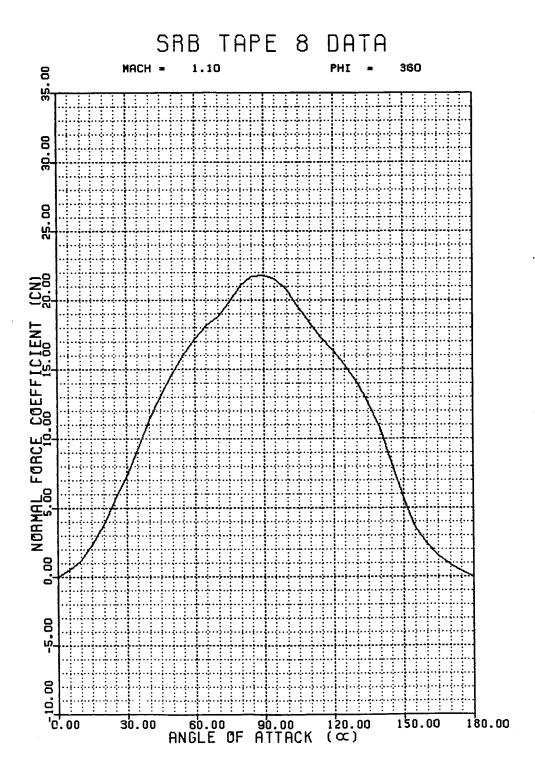
B-87



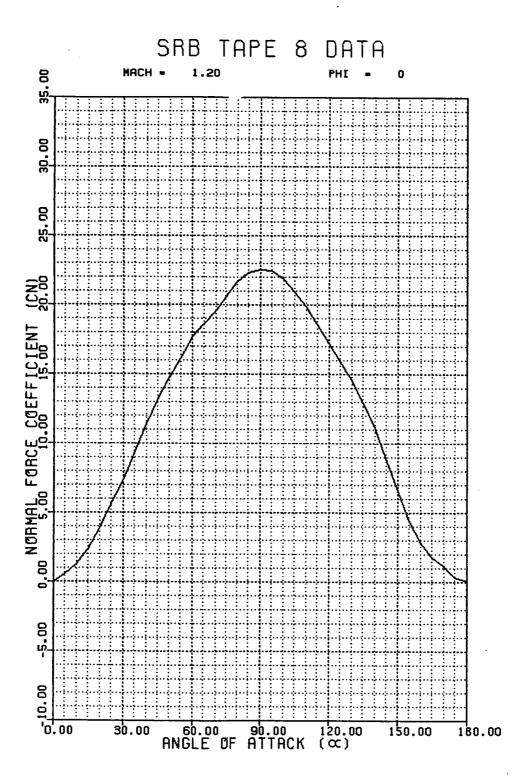
B-88
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 35.00 315 30.00 25.00 0,00 NORMAL FORCE COEFFICIENT (CN) -5.00 0.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 150.00 180.00

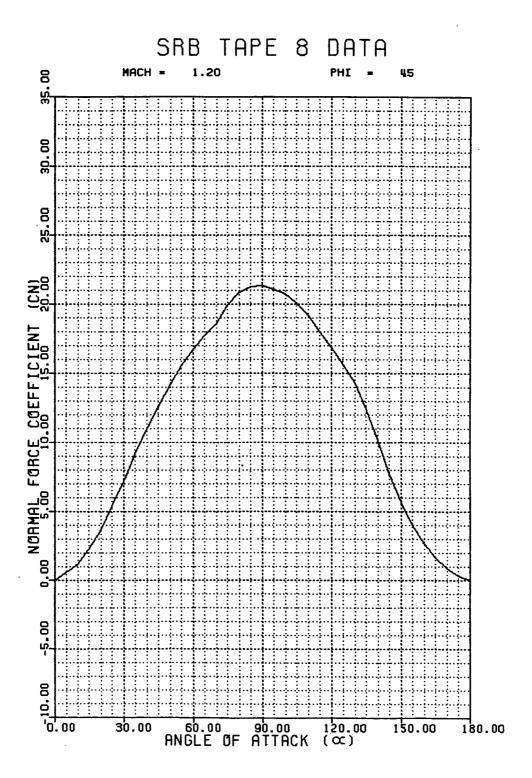
B-89



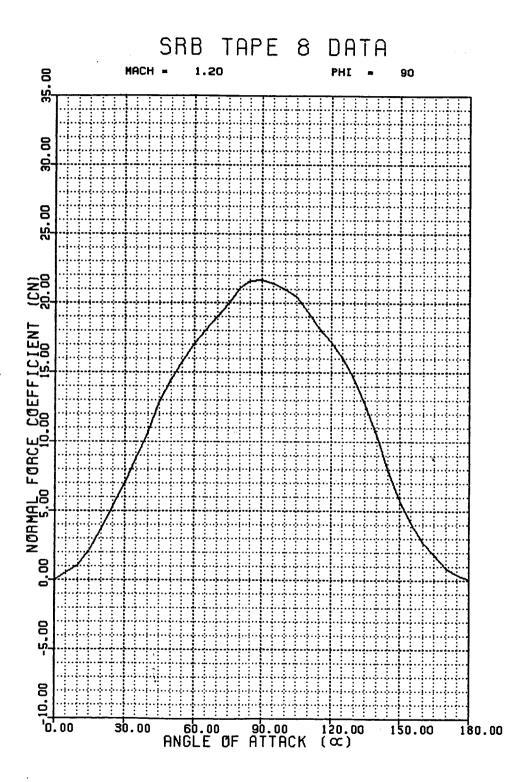
B-90 LOCKHEED-HUNTSVILLE ENGINEERING CENTER



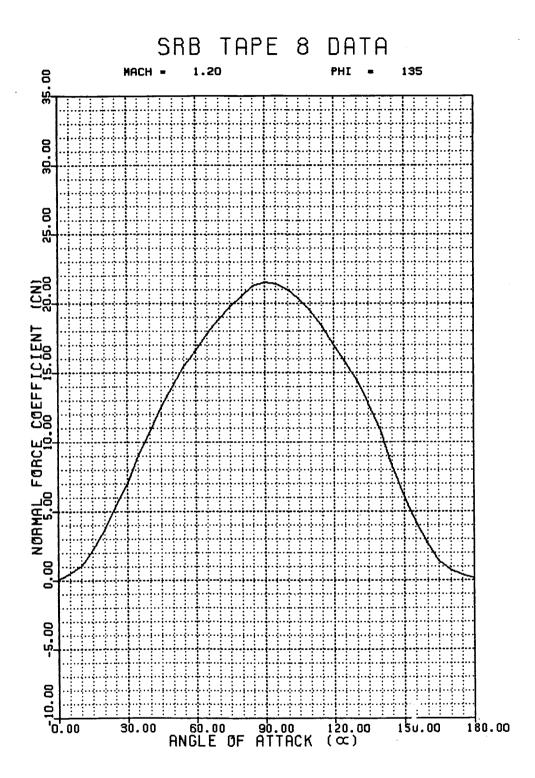
B-91



B-92
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

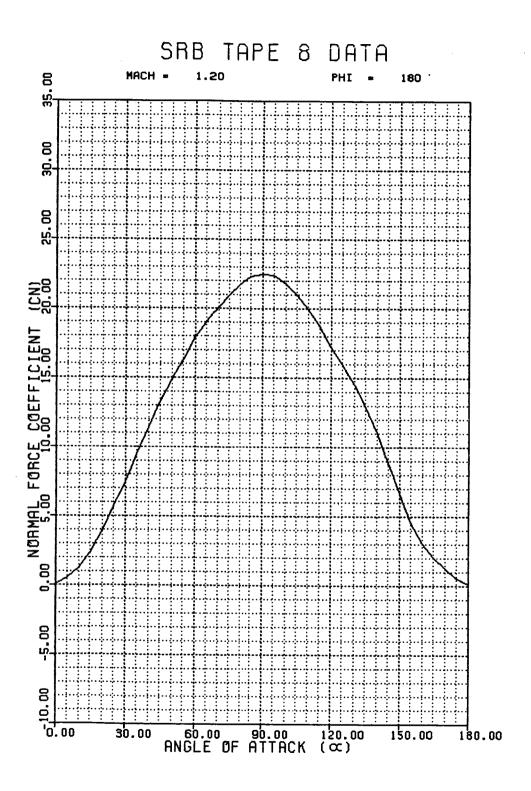


B-93

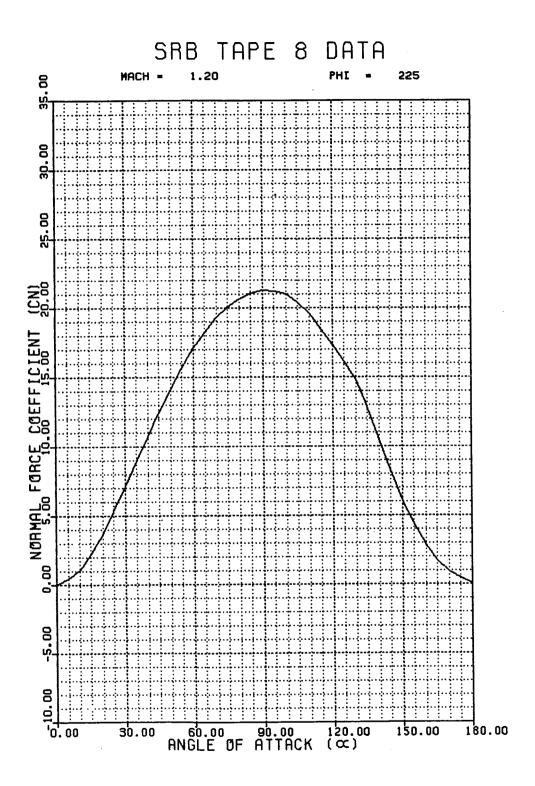


B-94

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



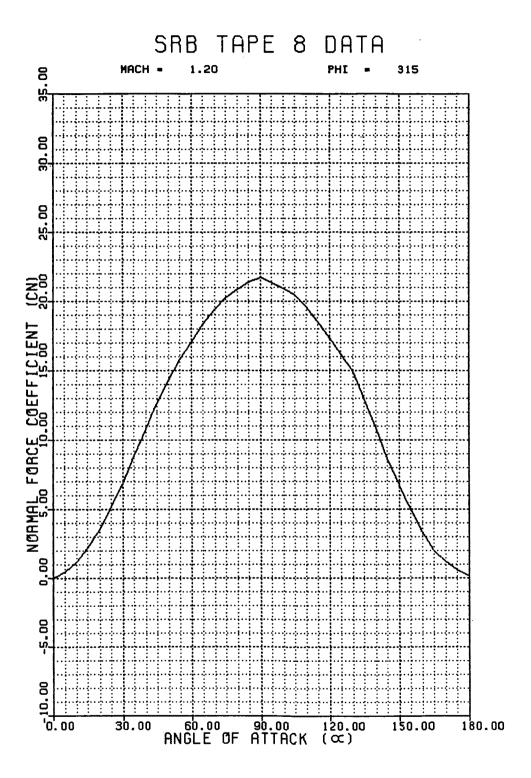
B-95



B-96
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 35.00 270 30.00 25.00 0,00 NORMAL FORCE COEFFICIENT (CN) -5.00 00.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

B-97

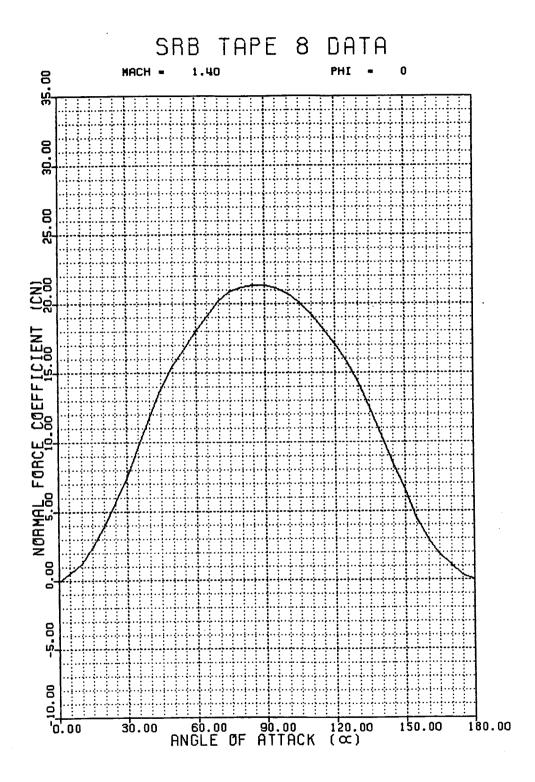


B-98

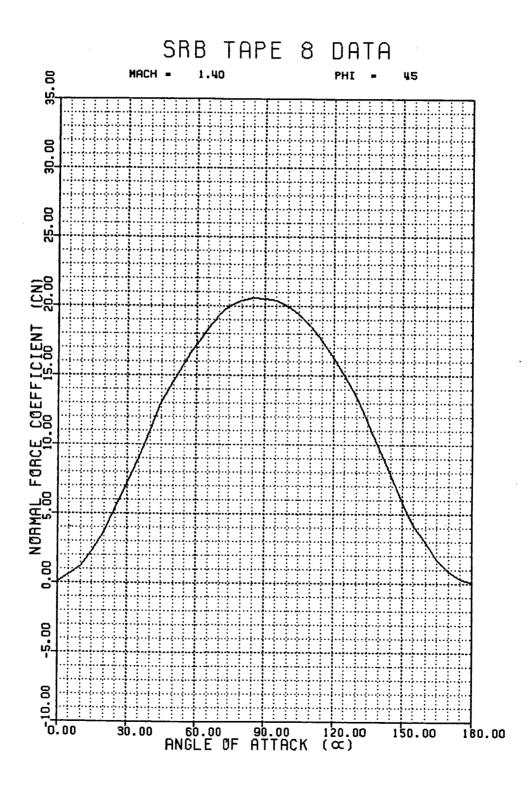
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 35.00 360 30.00 25.00 0,00 NØRMAL FØRCE CØEFFICIENT (CN) -5.00 00.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

B-99

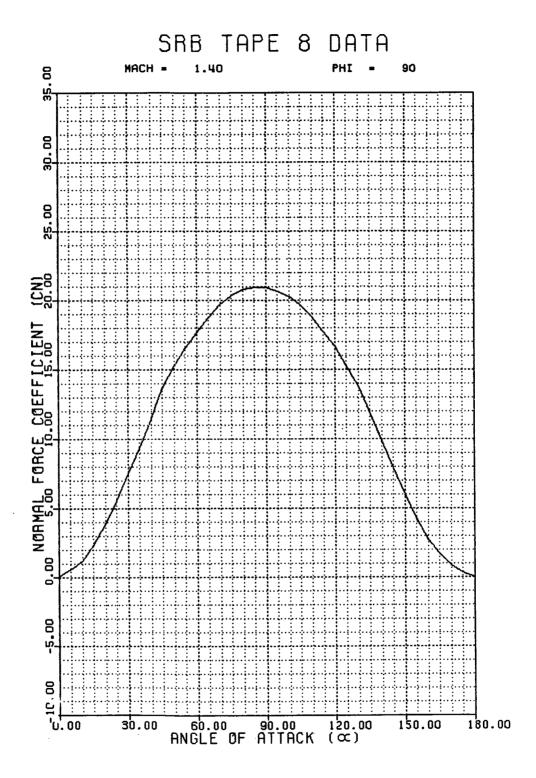


B-100
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



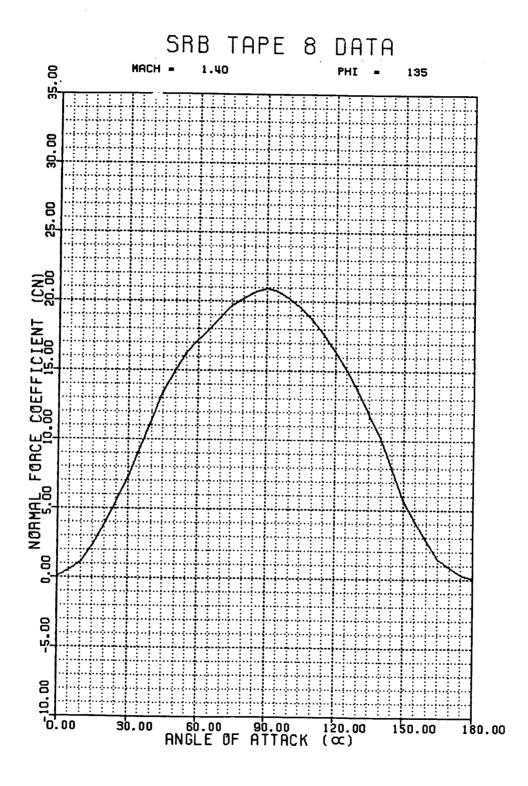
B-101

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



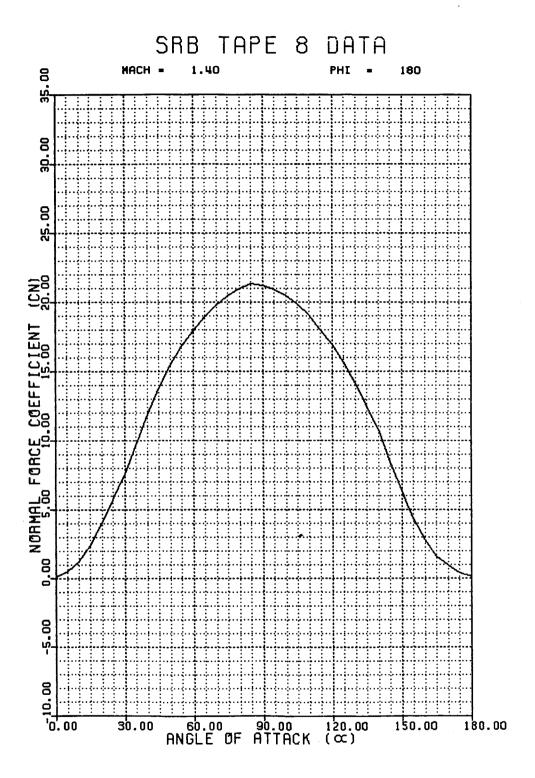
B-102

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



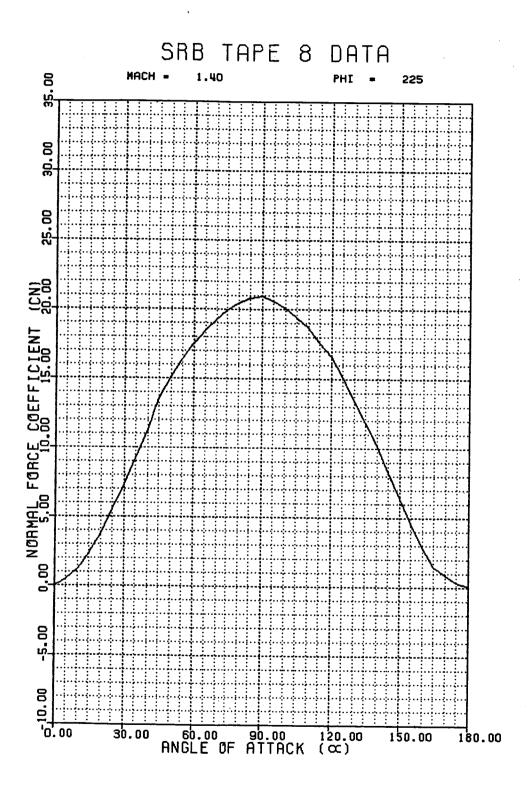
B-103

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

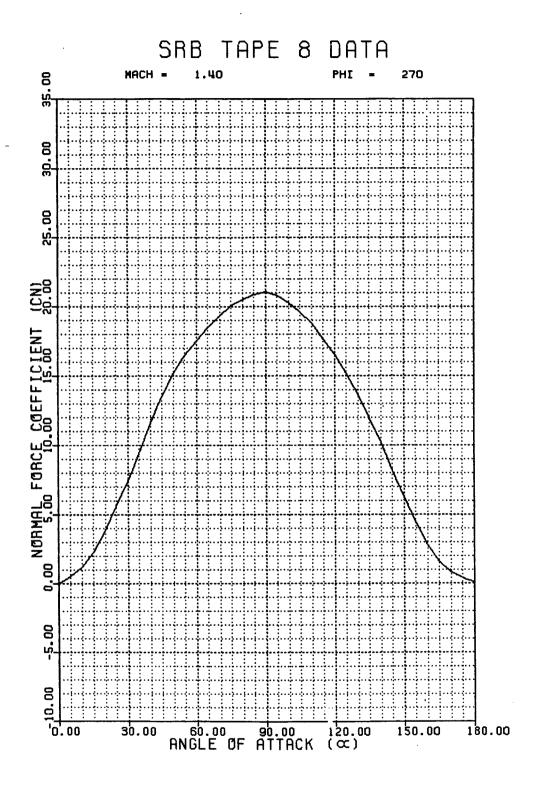


B-104

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

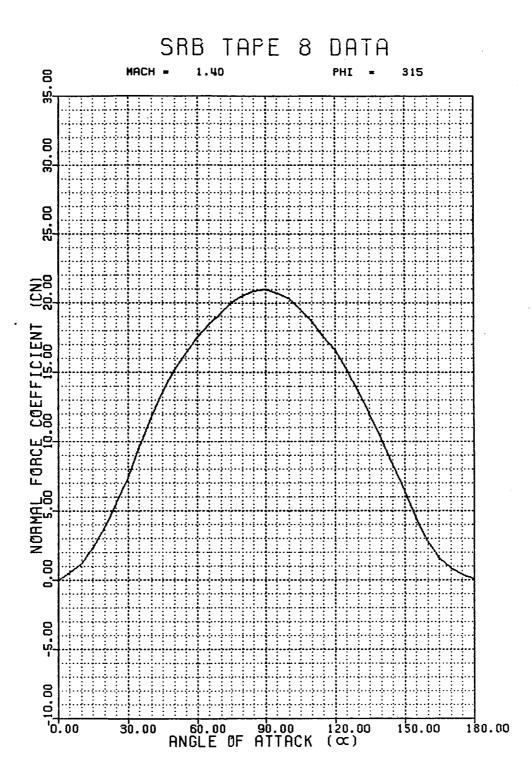


B-105



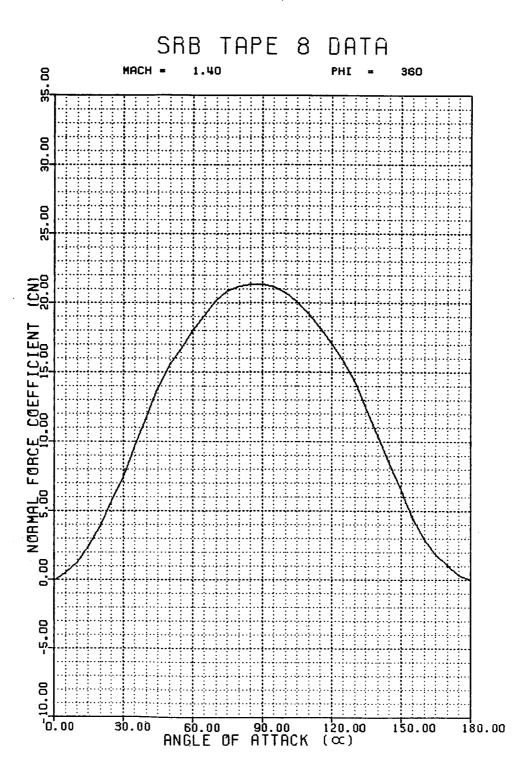
B-106

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-107

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

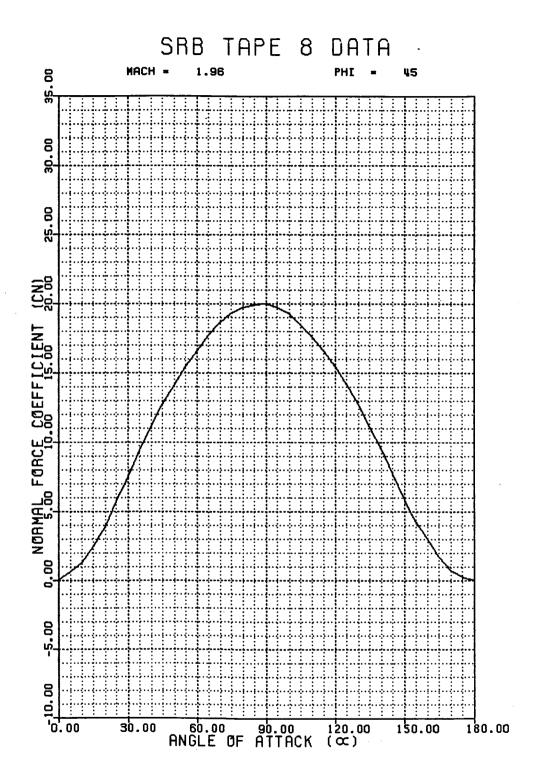


B-108

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

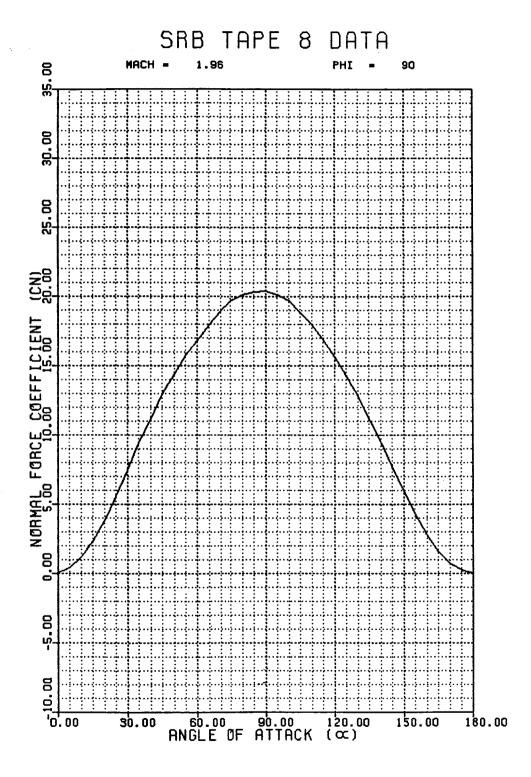
SRB TAPE 8 DATA 35.00 30.00 25.00 0,00 S,00 FORCE COEFFICIENT -5.00 0.0 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

B-109



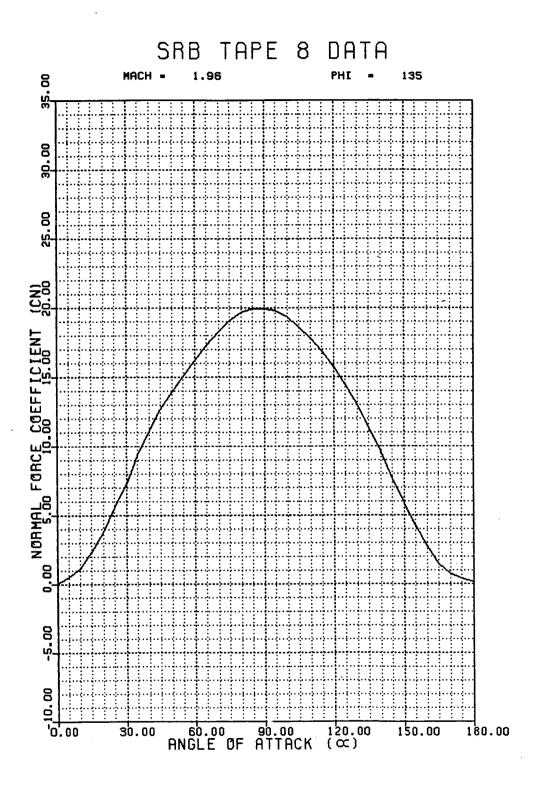
B-110

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

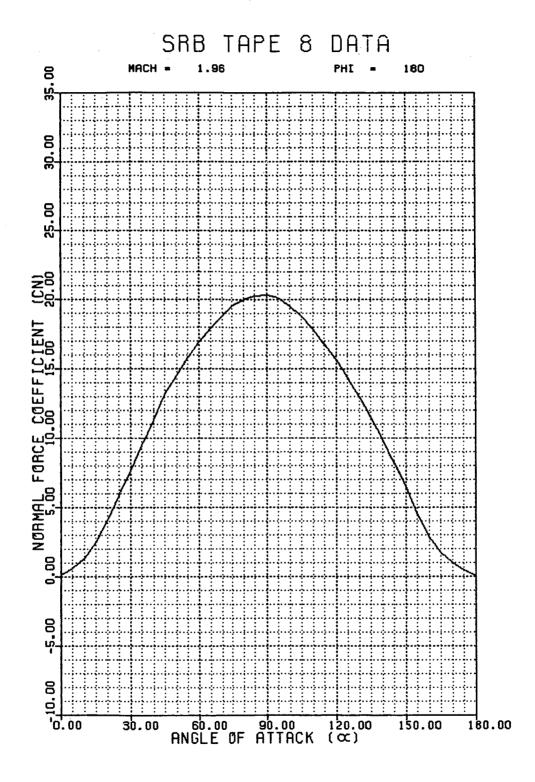


B-111

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

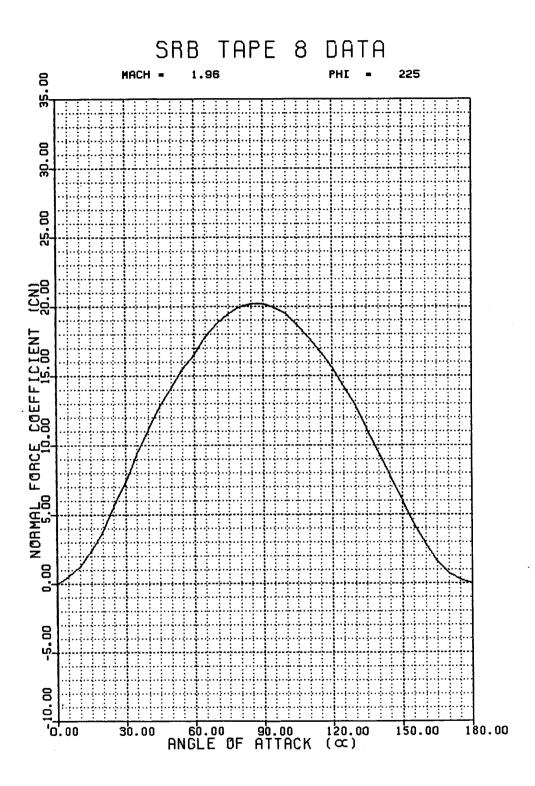


B-112
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



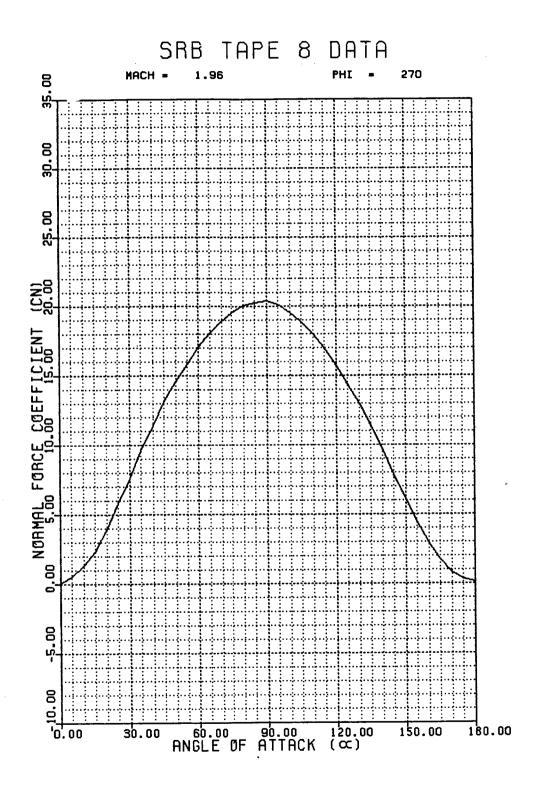
B-113

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



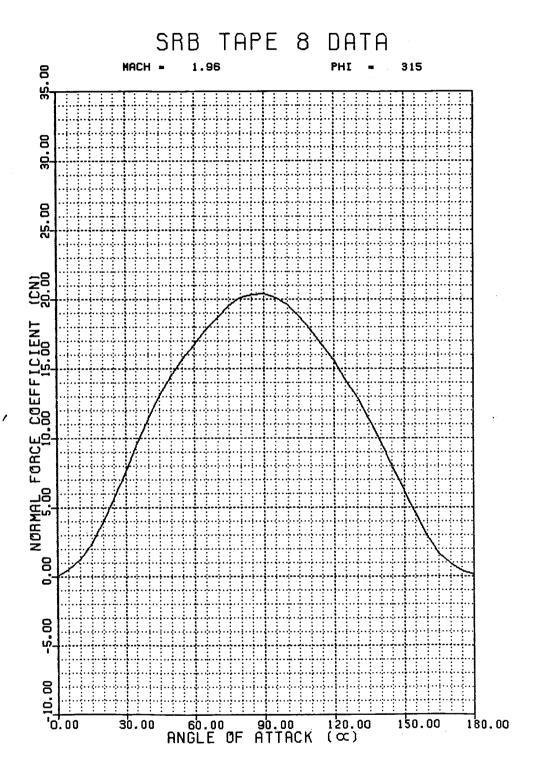
B-114

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



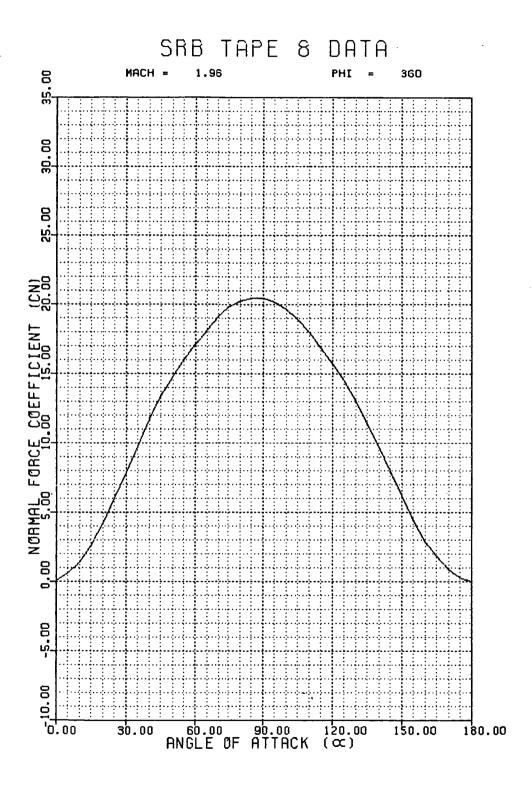
B-115

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

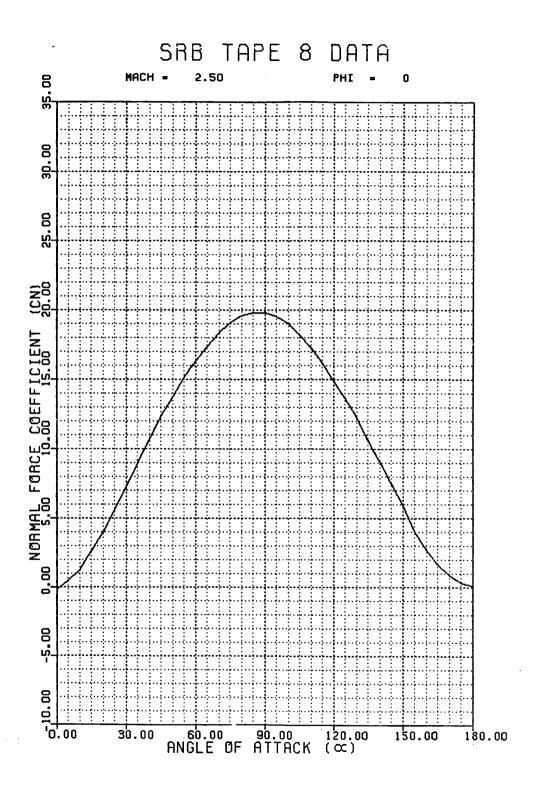


B-116

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

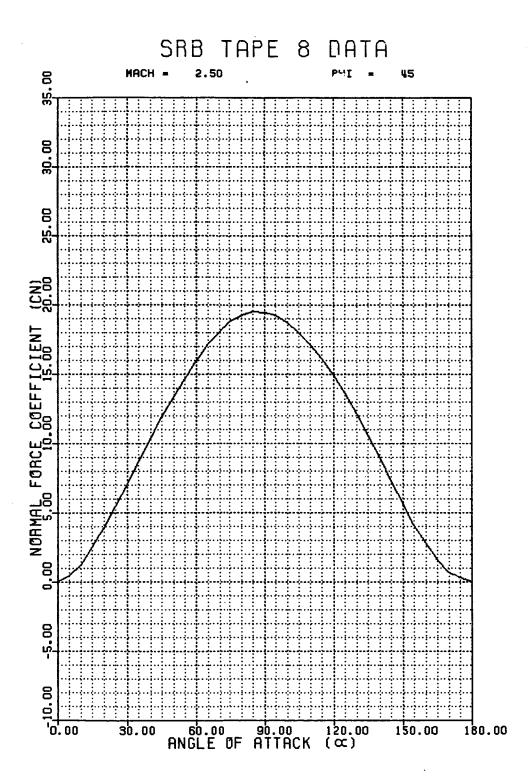


B-117
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

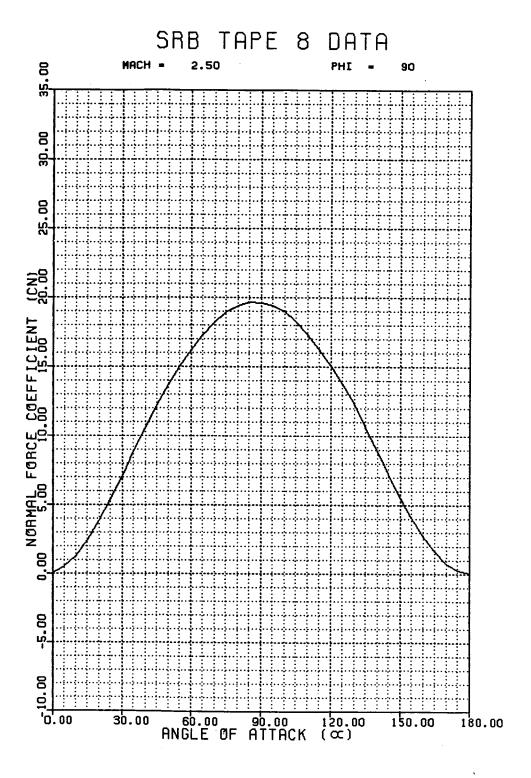


B-118

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

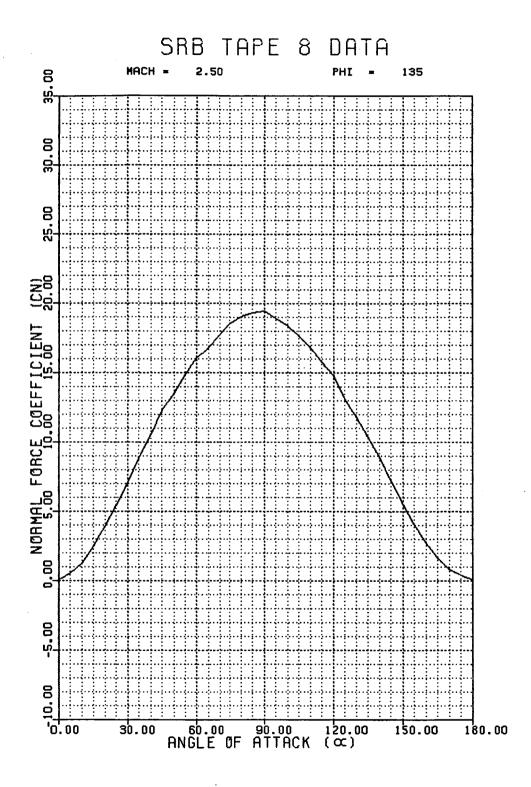


B-119

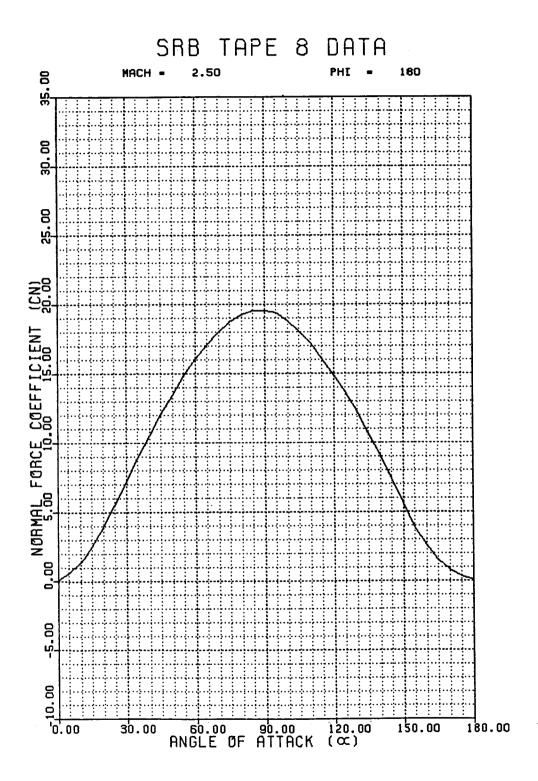


B-120

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

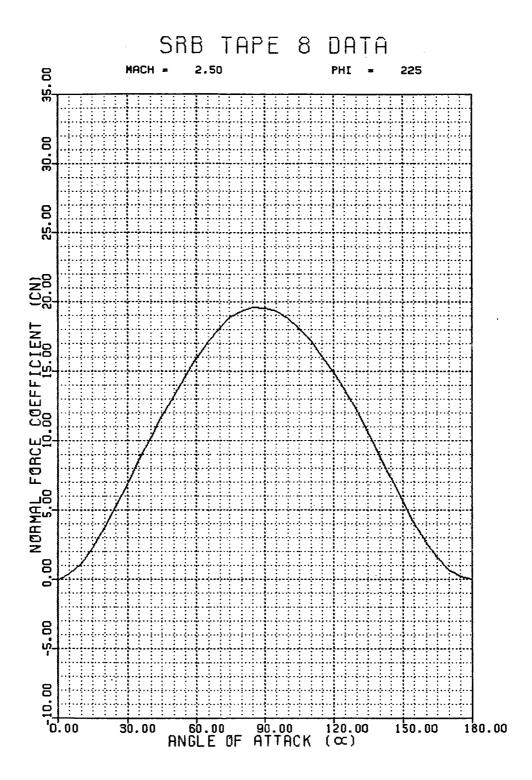


B-121
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



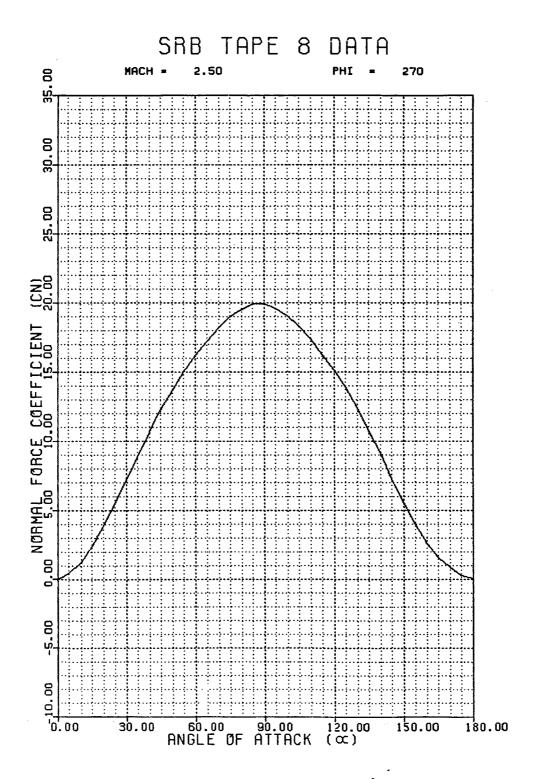
B-122

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



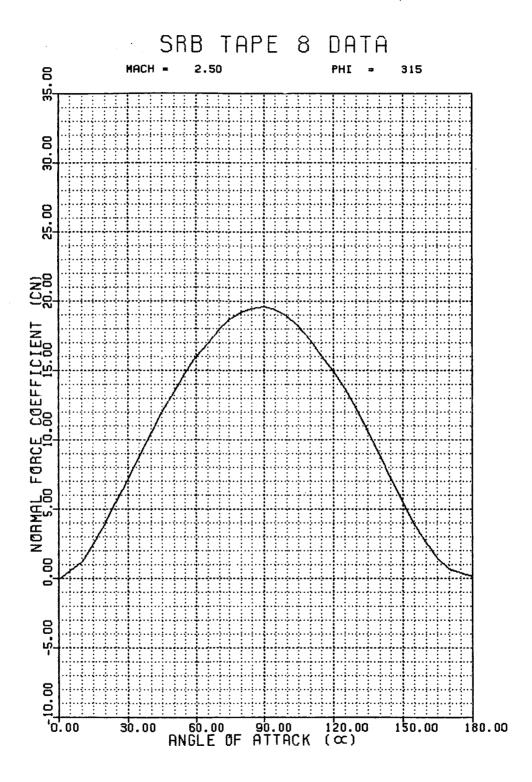
B-123

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

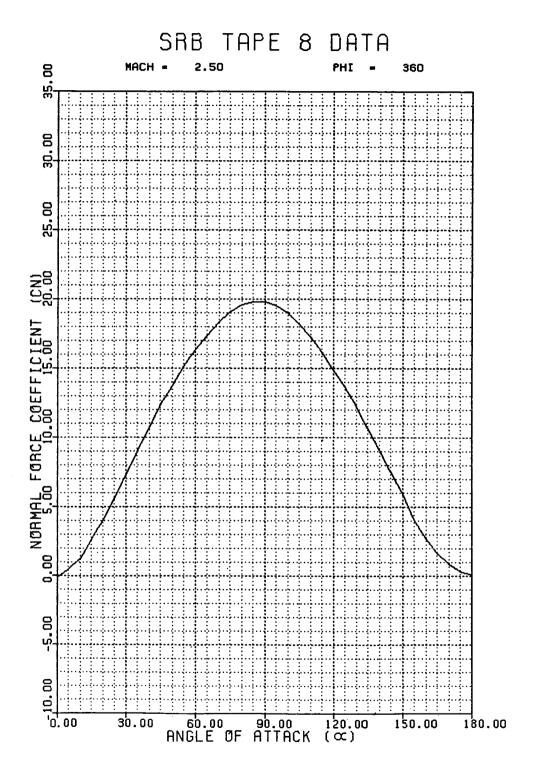


B-124

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

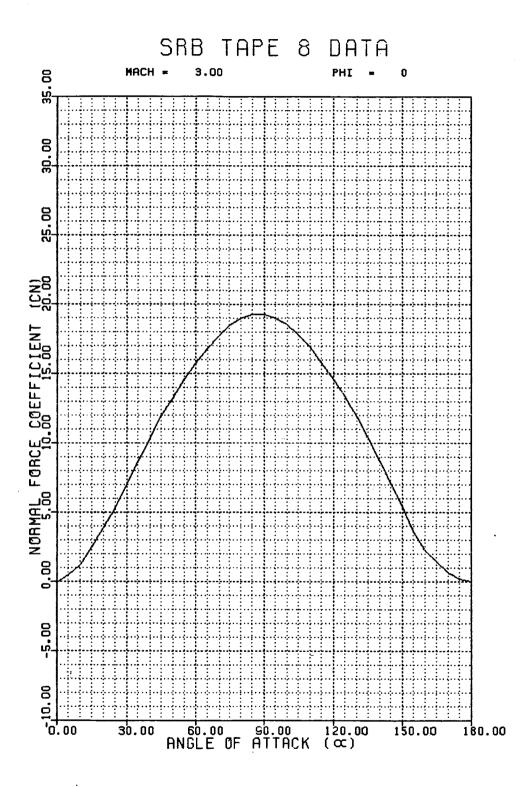


B-125
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-126

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



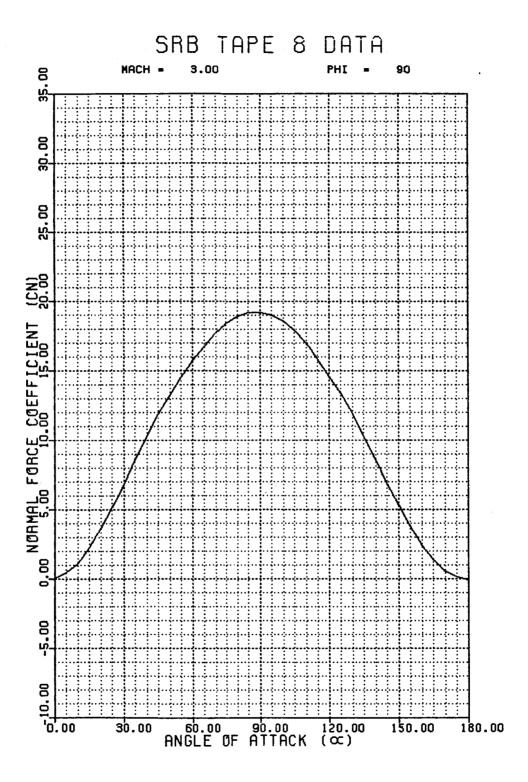
B-127

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 3.00 8 30°00 NORMAL FORCE COEFFICIENT 00.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

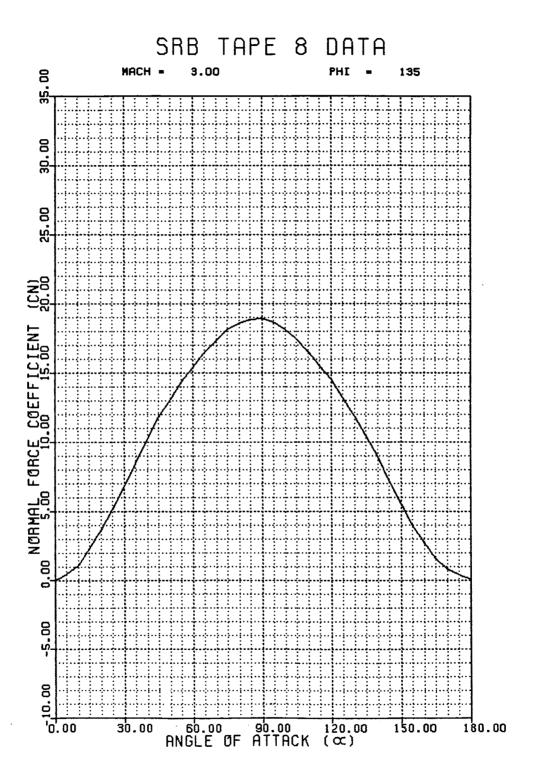
B-128

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



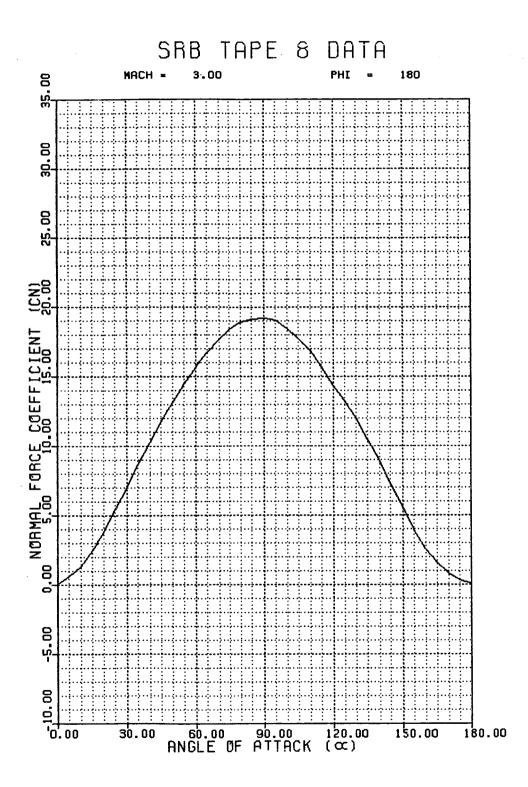
B-129

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

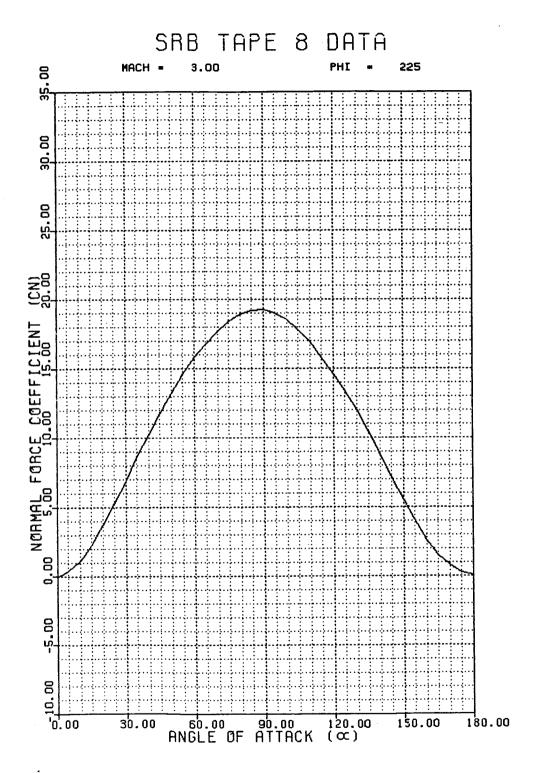


B-190

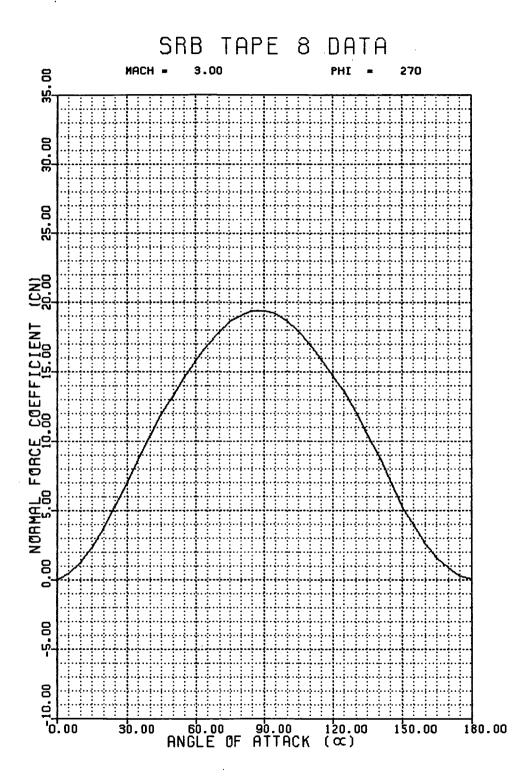
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



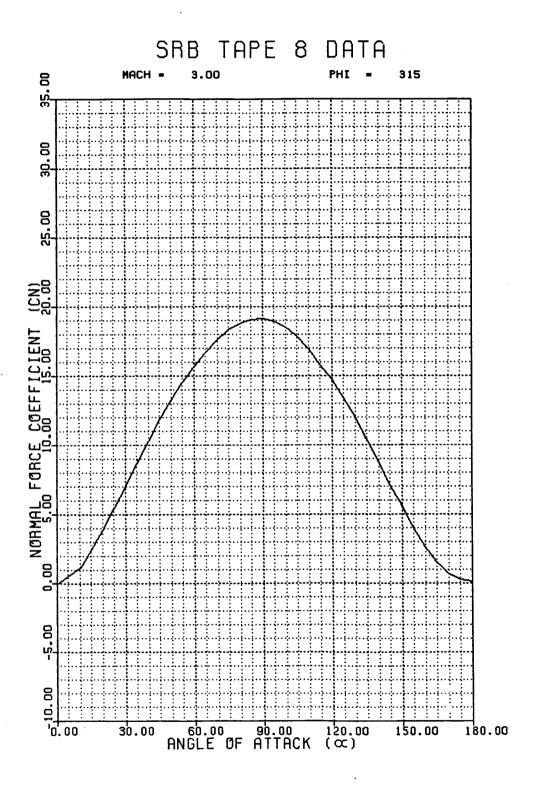
B-131
LOCKHEED-HUNTSVILLE ENGINEERING CENTER.



B-132
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

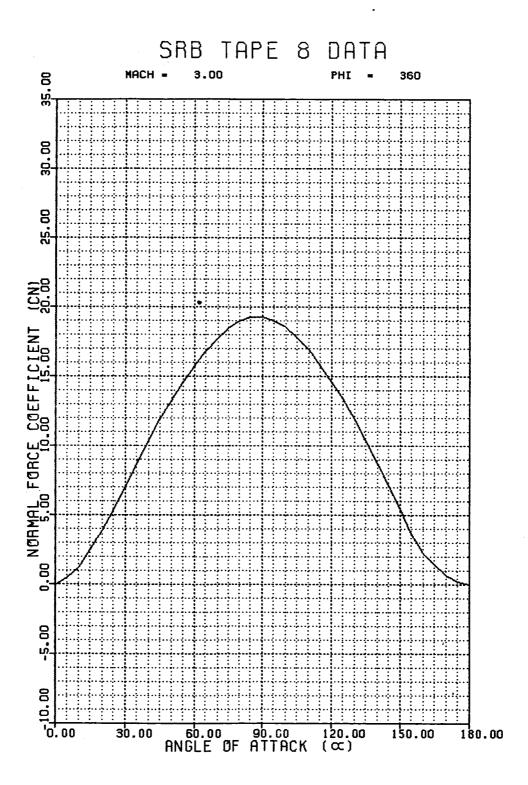


B-133

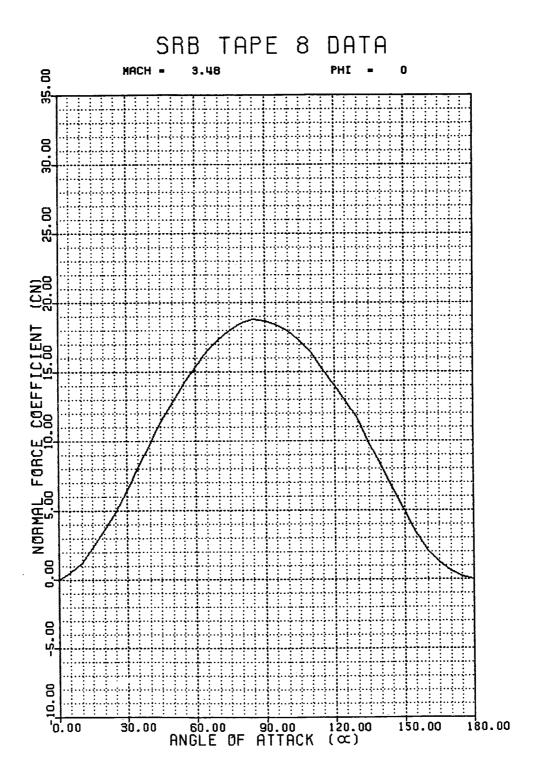


B-134

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

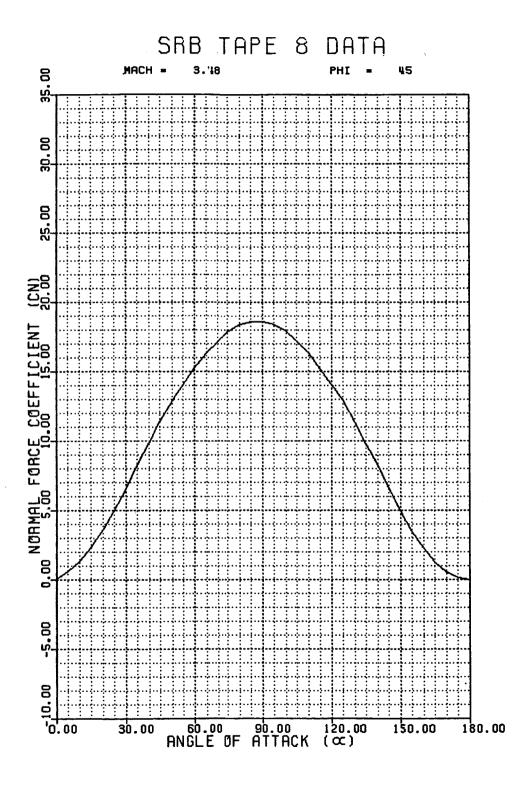


B-195
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



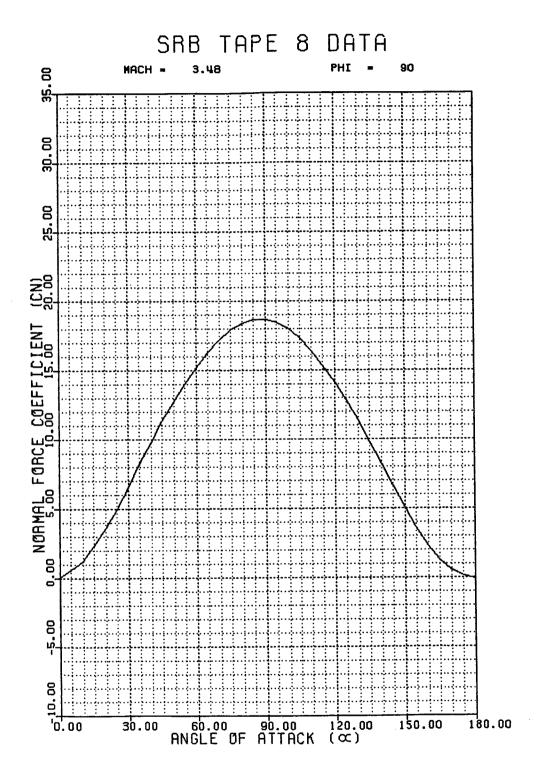
B-136

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



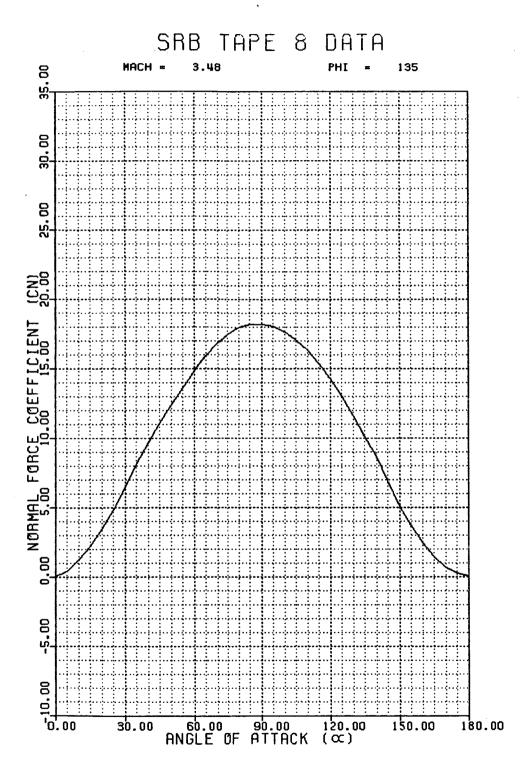
B-197

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

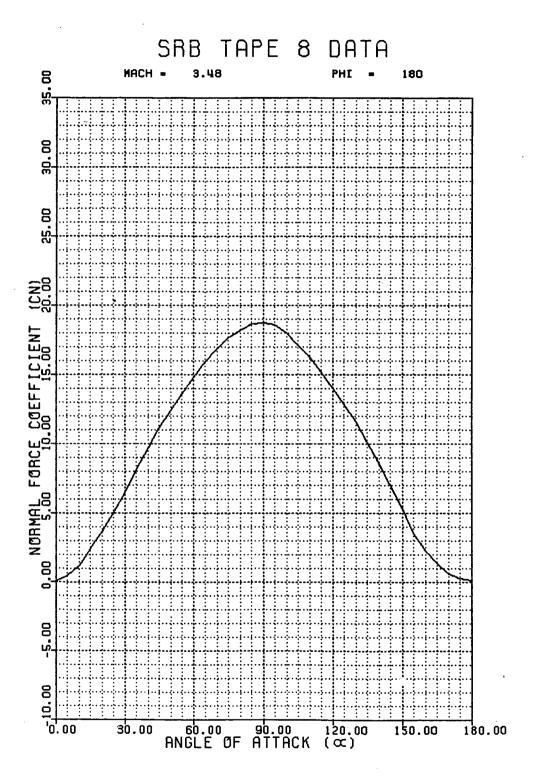


B-138

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

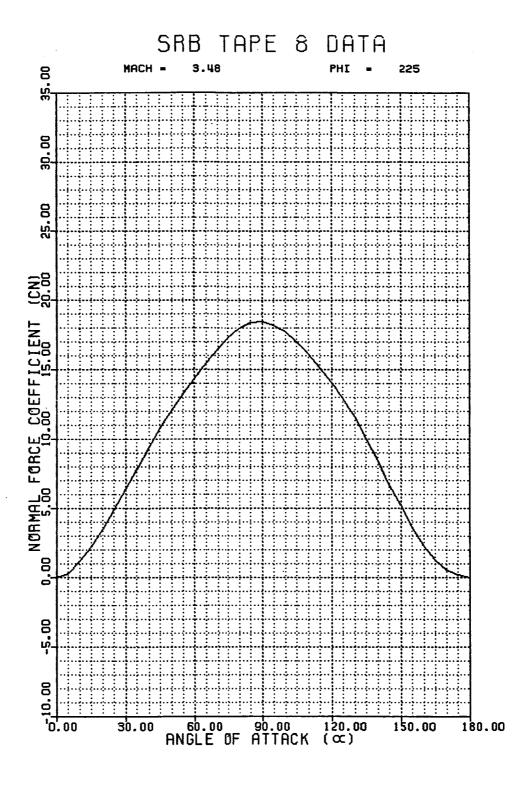


B-139



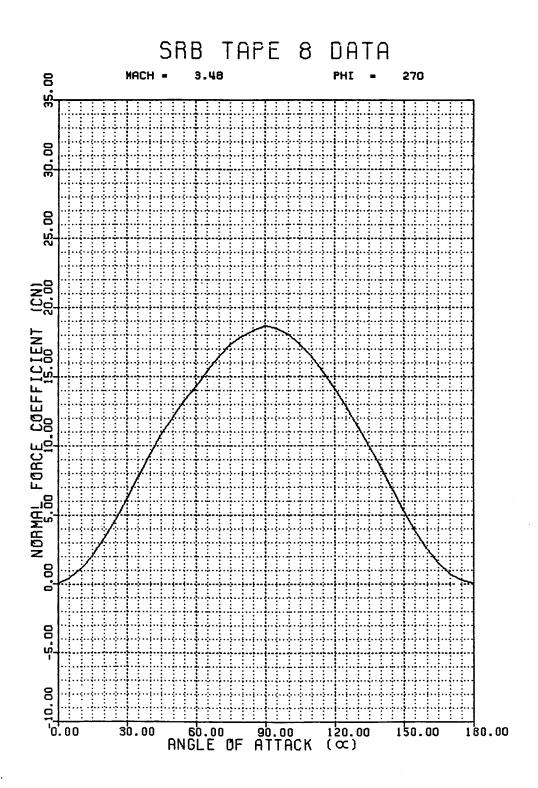
B-140

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

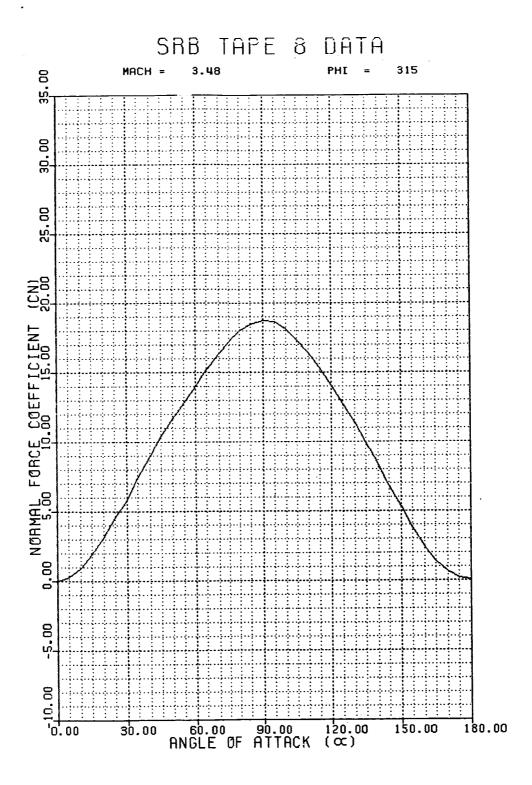


B-141

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

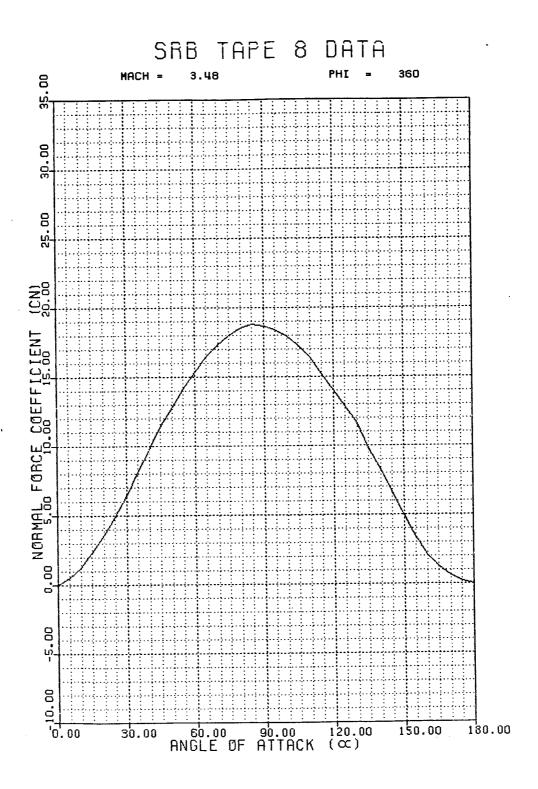


B-142
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-143

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

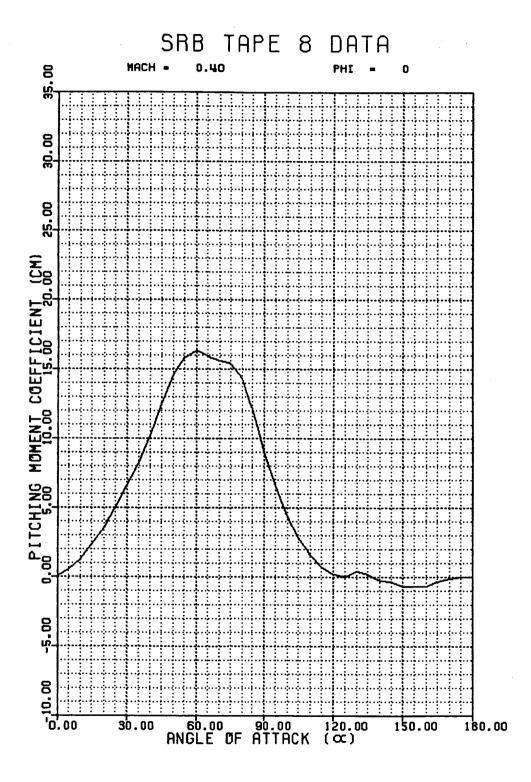


B-144

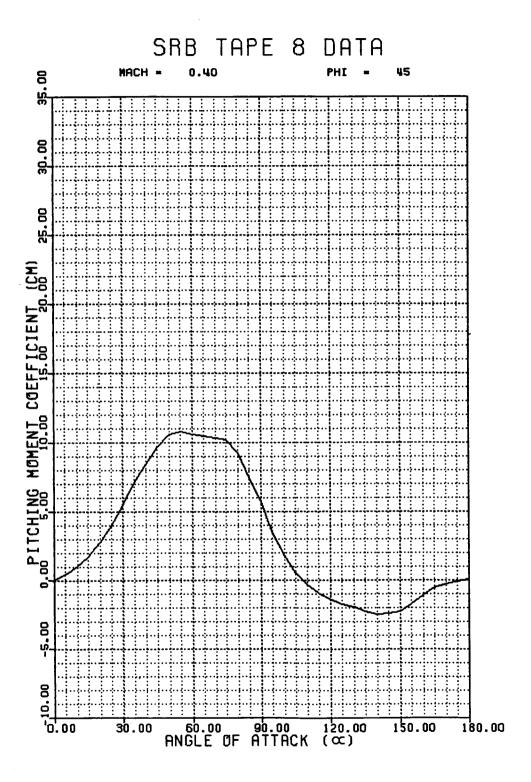
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

PITCHING MOMENT (CM)

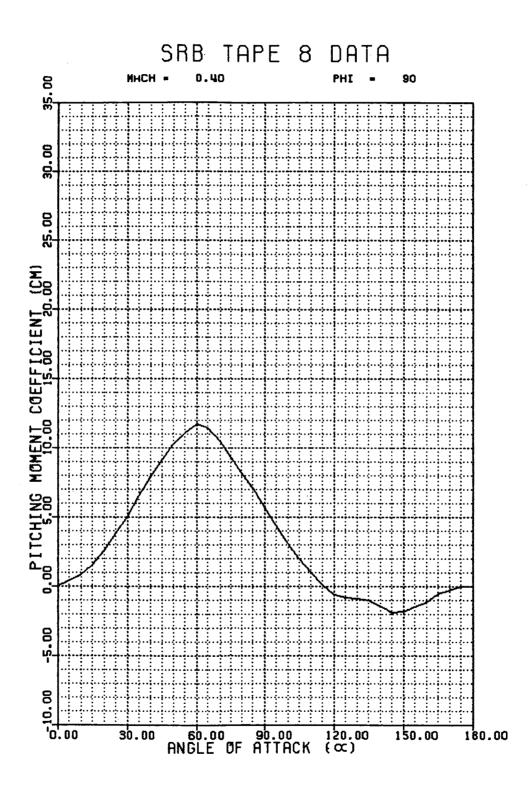
Mach Number	Page
0.4	B-145
0.5	B-154
0.55	B-163
0.6	B-163
0.7	B-181
0.8	B-190
0.9	B-199
0.95	B-208
1.05	B-217
1.1	B-226
1.2	B-235
1.4	B-244
1.96	B-253
2.5	B-262
3.0	B-271
3.48	B-280



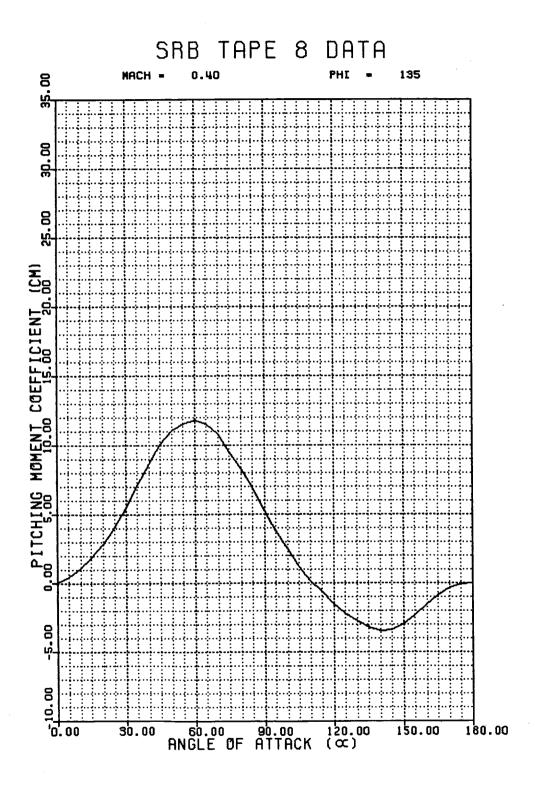
B-145



B-146
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

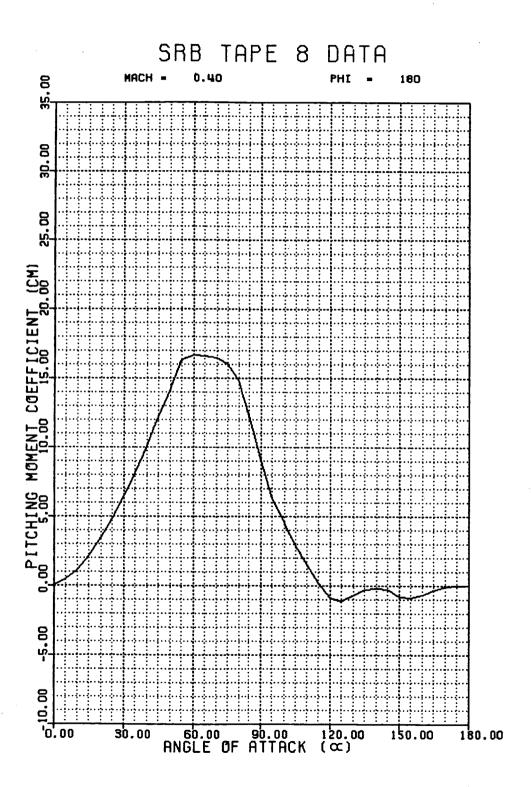


B-147
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

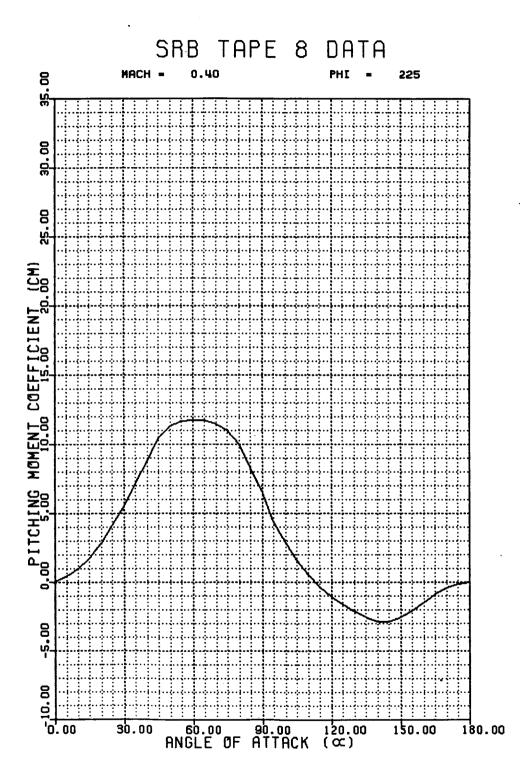


B-148

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

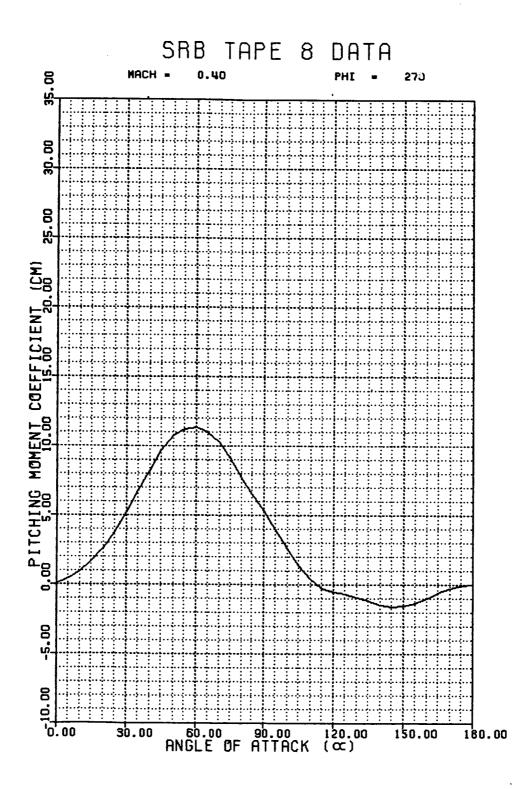


B-149

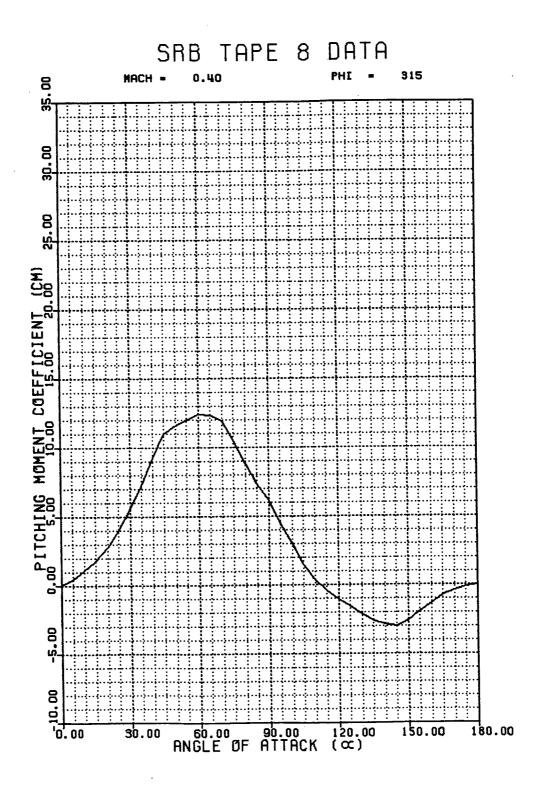


B-150

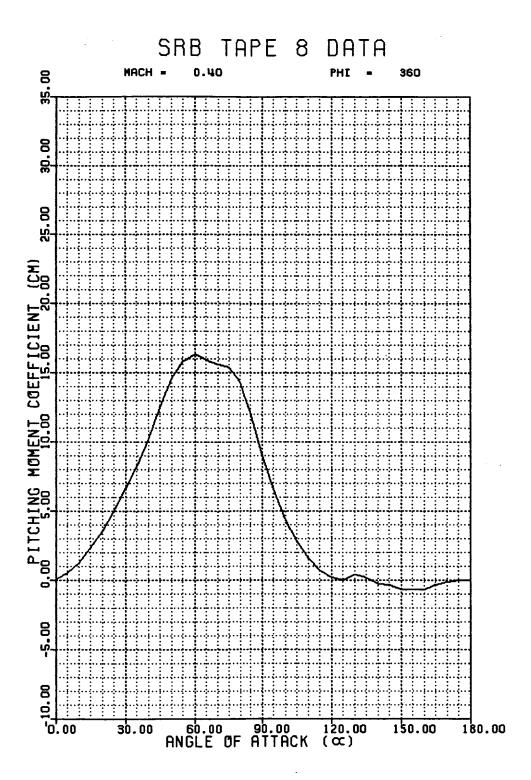
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



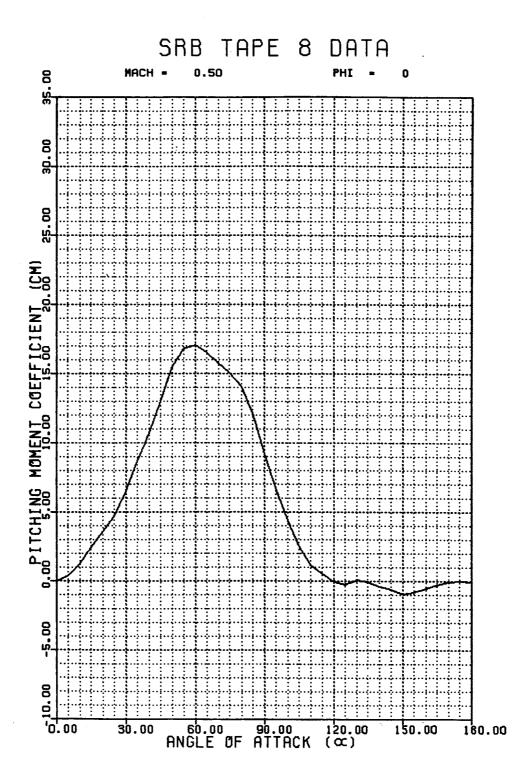
B-151
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-152
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

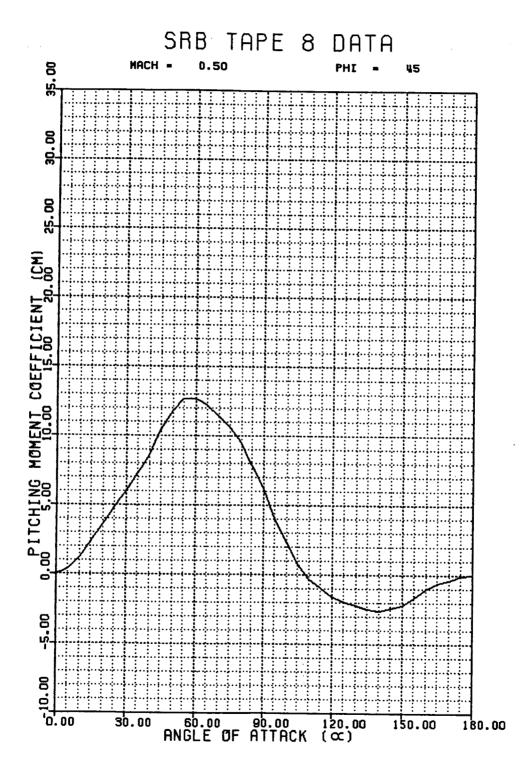


B-153

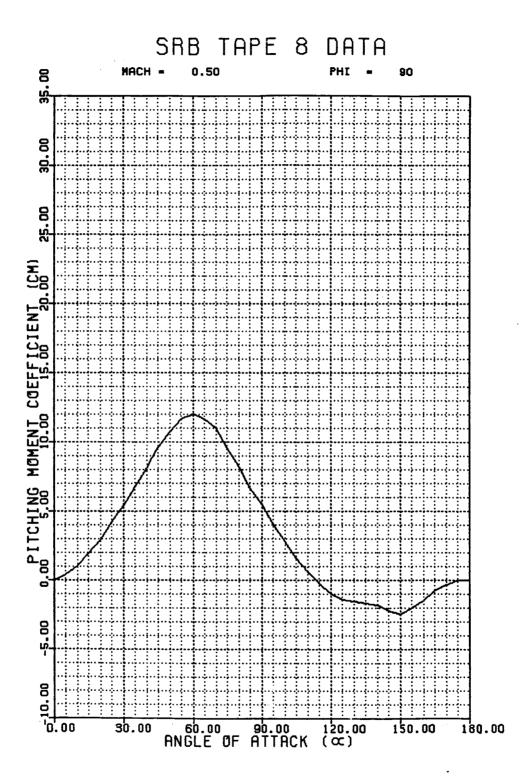


B-154

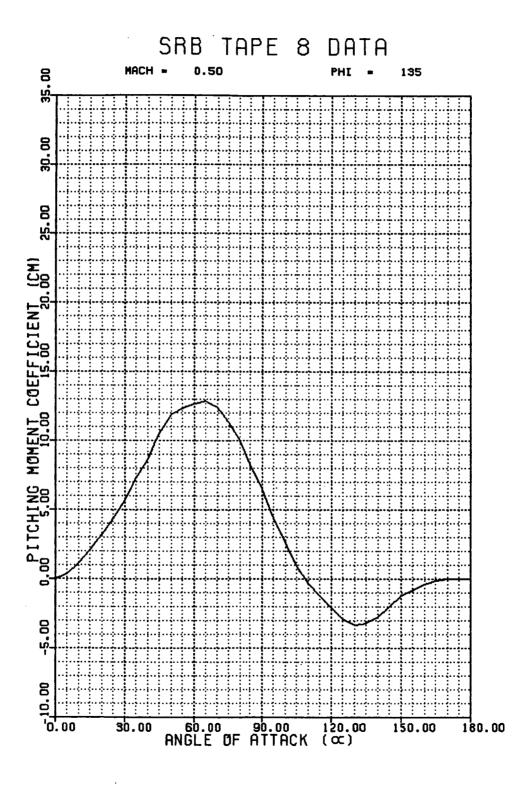
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-155

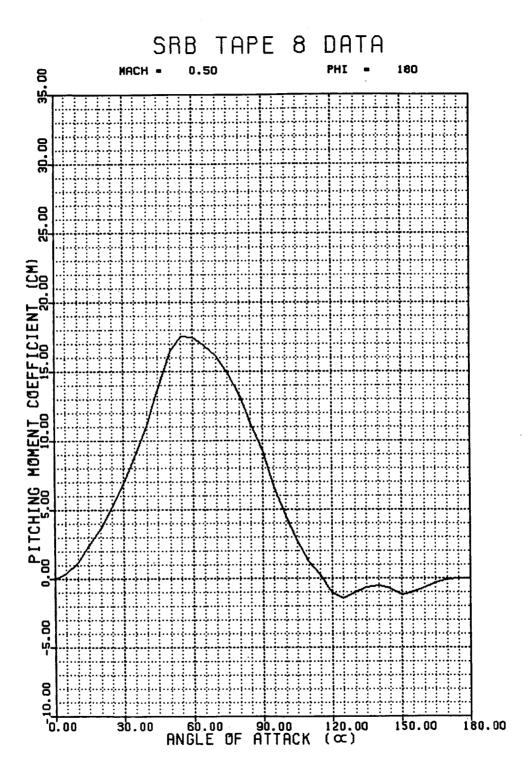


B-156
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



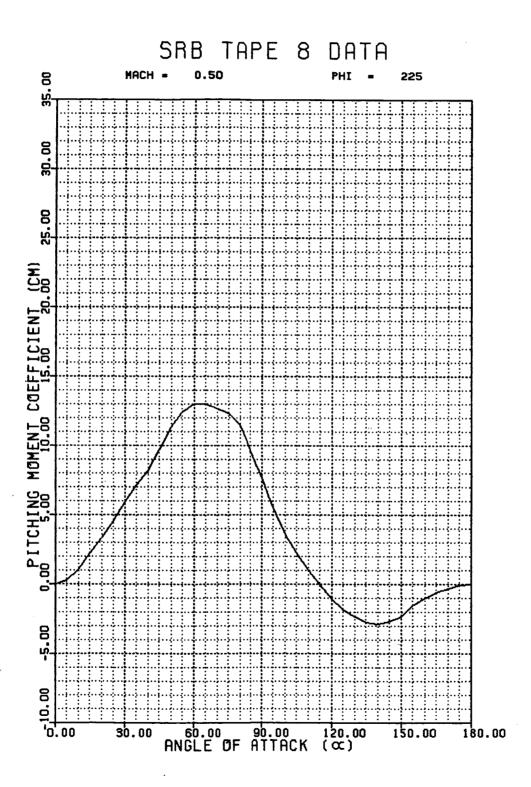
B-157

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

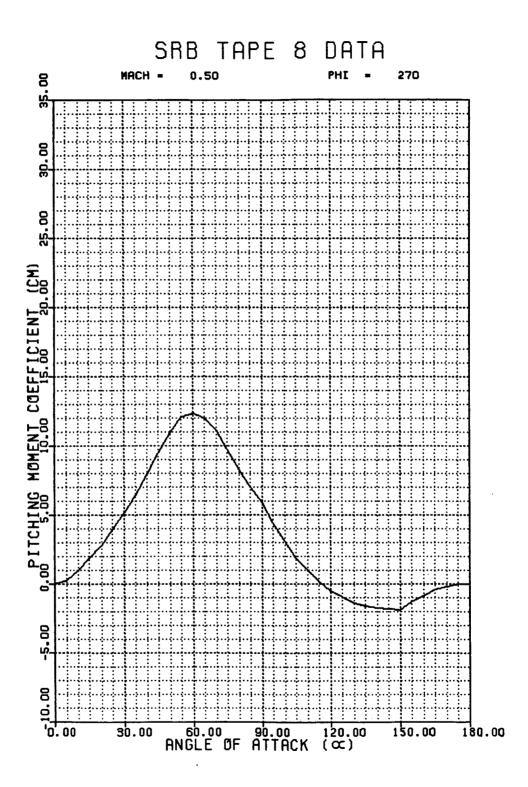


. 8-158

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

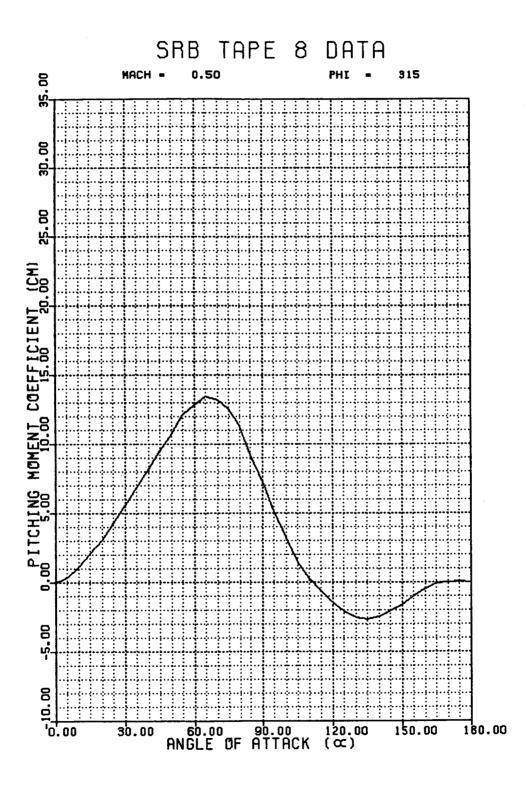


B-159

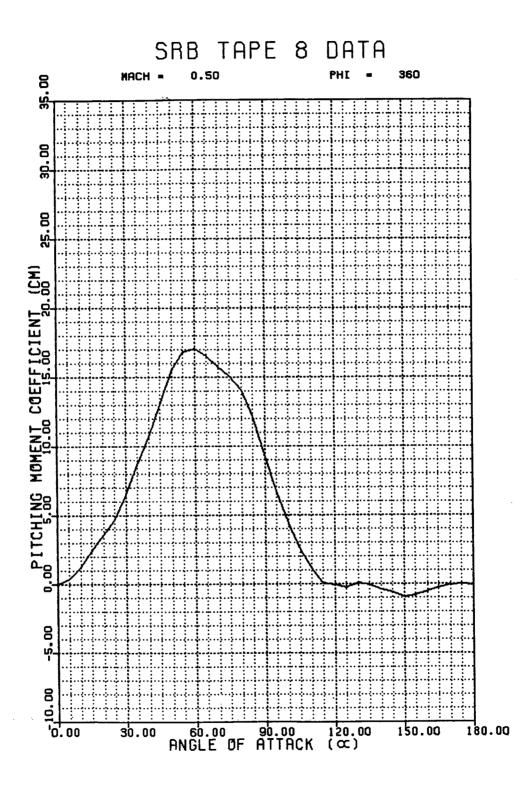


B-180

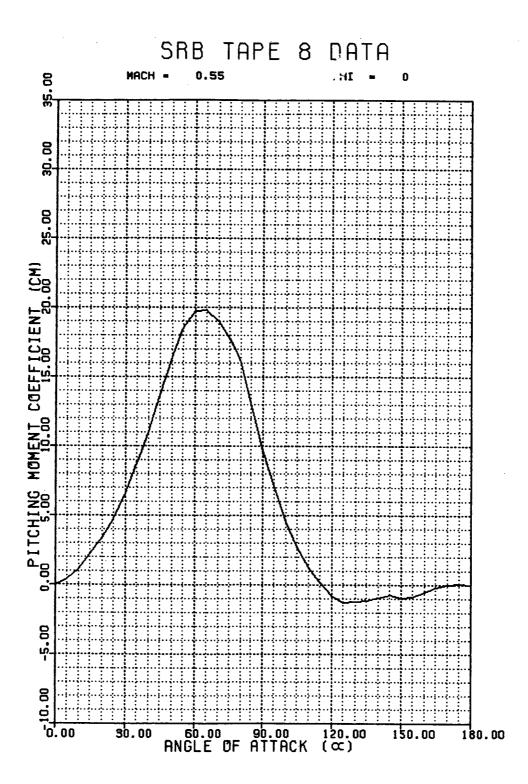
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-161
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

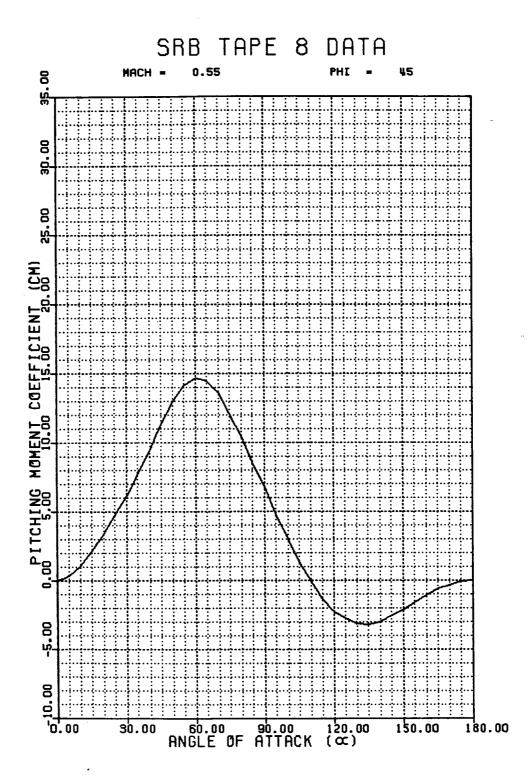


B-162
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



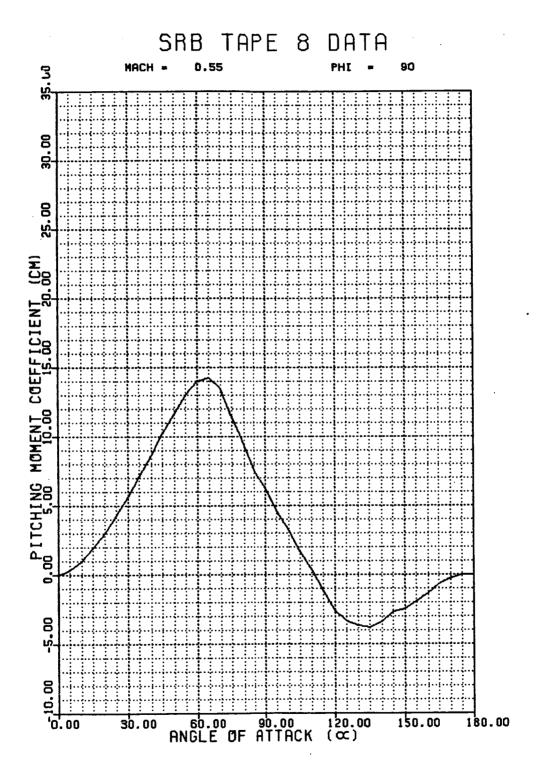
B-183

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

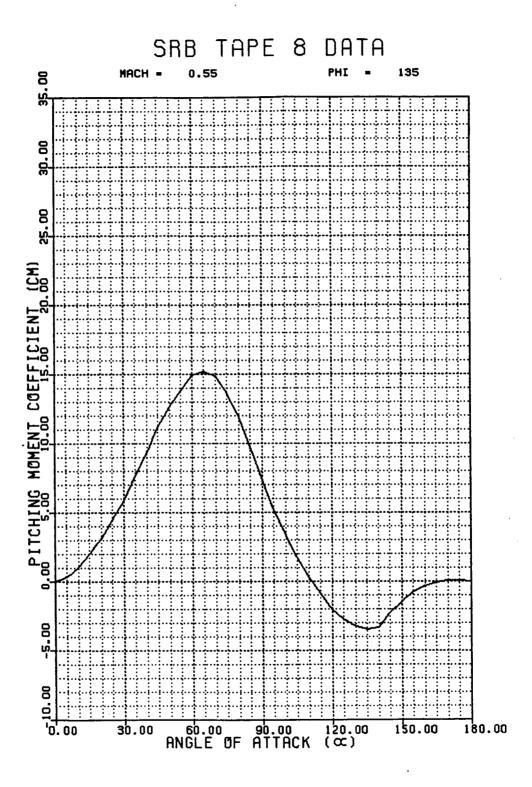


B-184

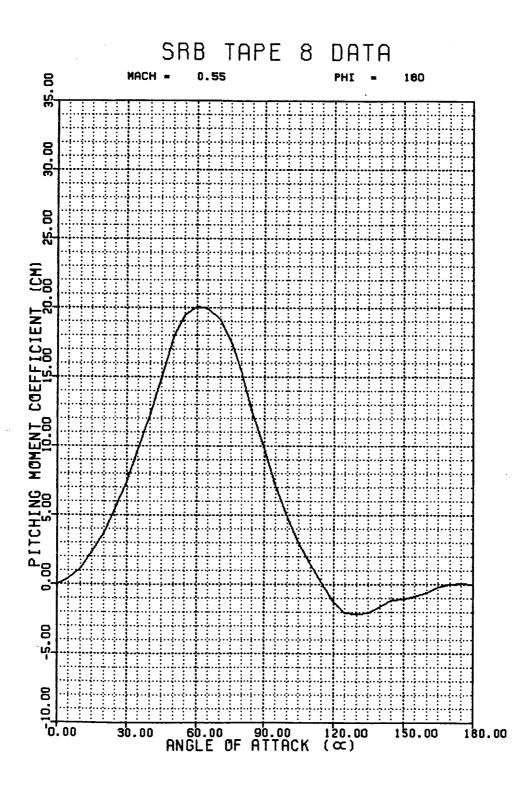
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



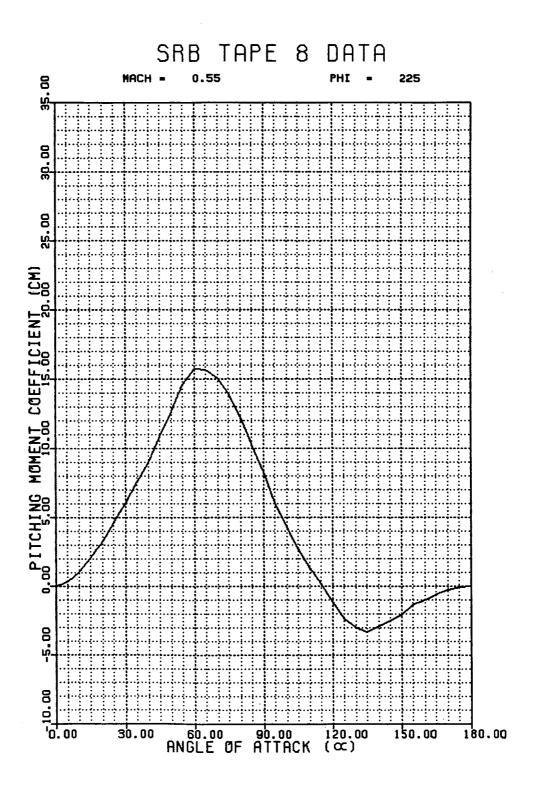
B-185
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-166
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

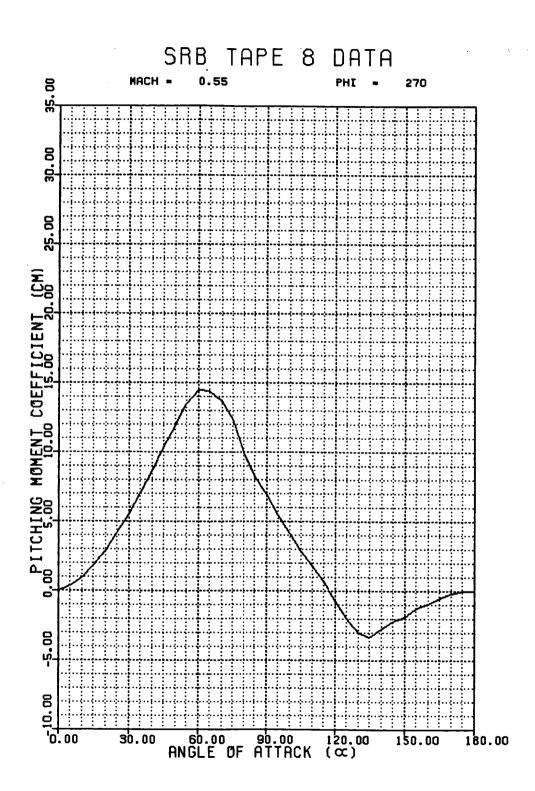


B-167
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

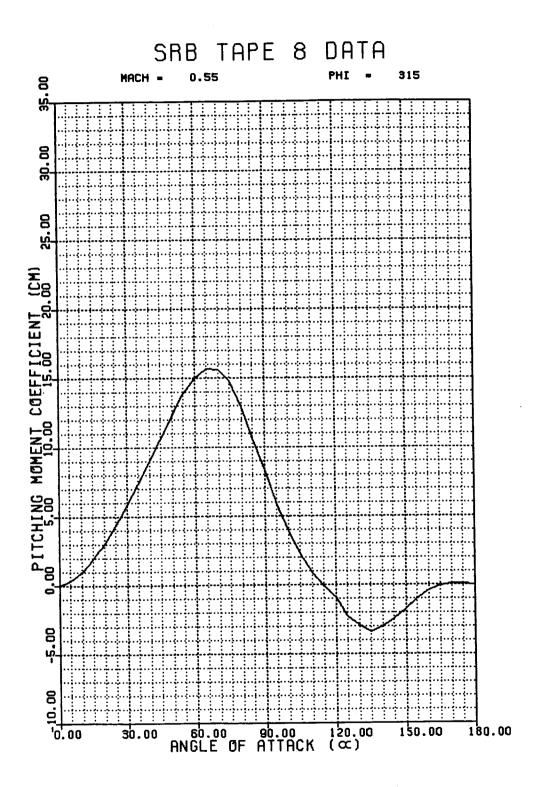


B-188

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

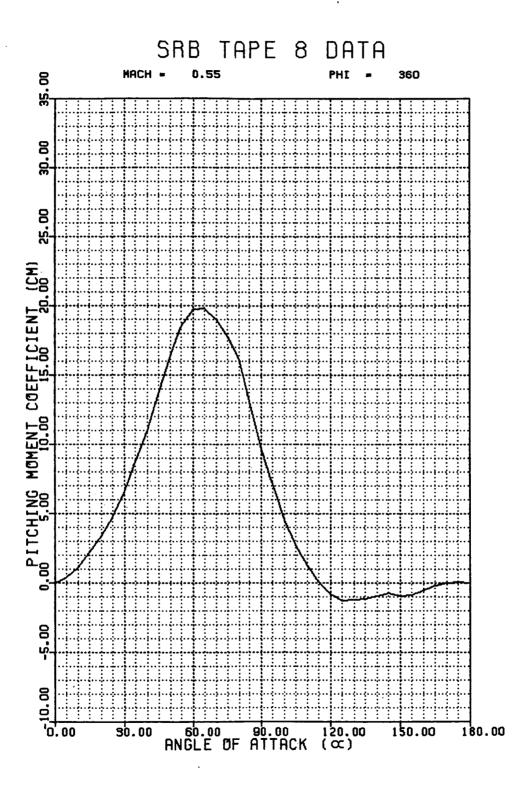


B-169



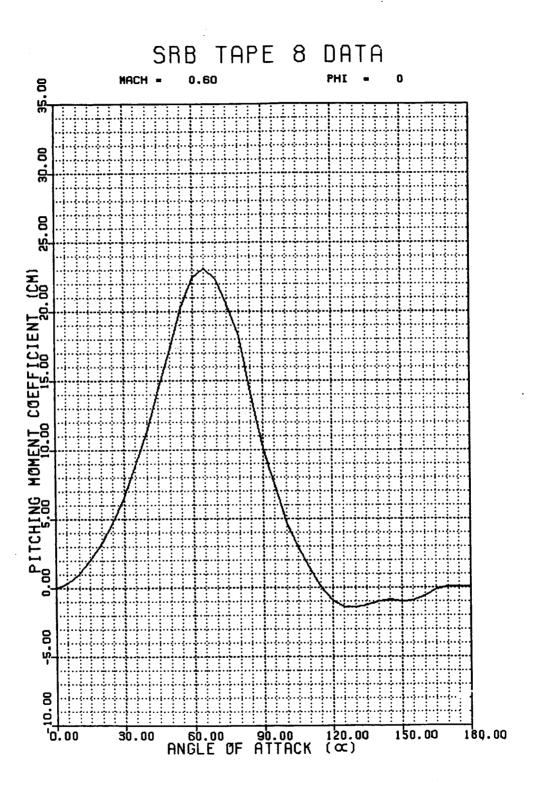
B-170

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



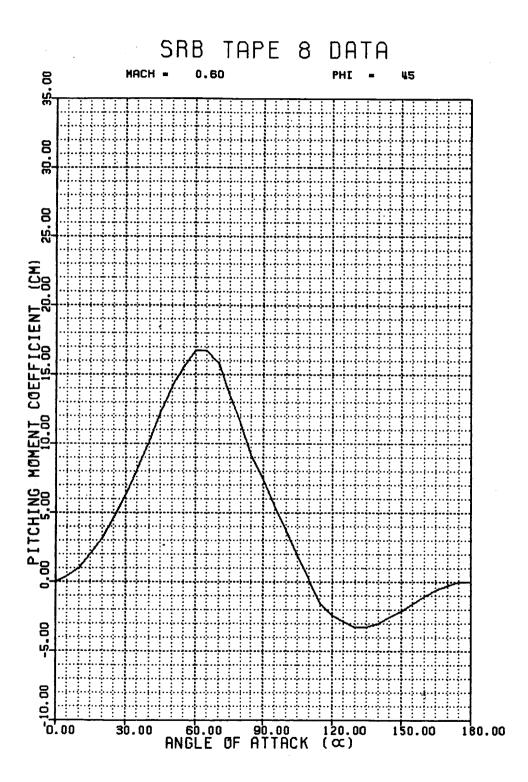
B-171

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



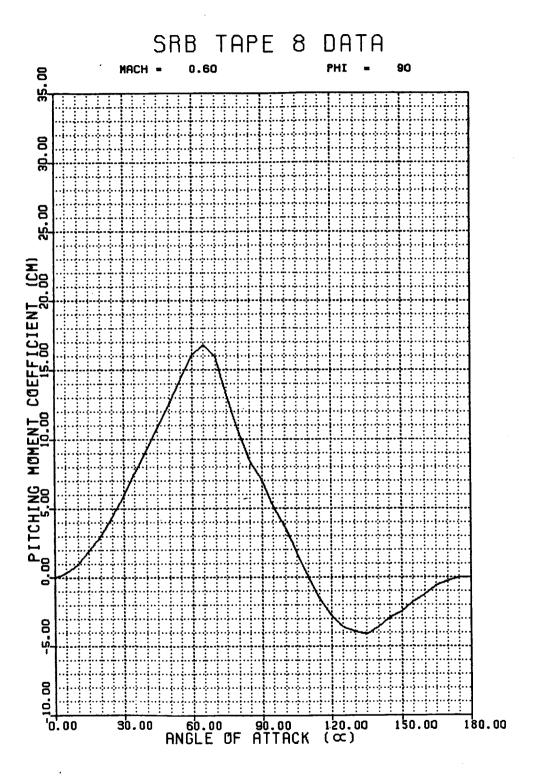
B-172

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

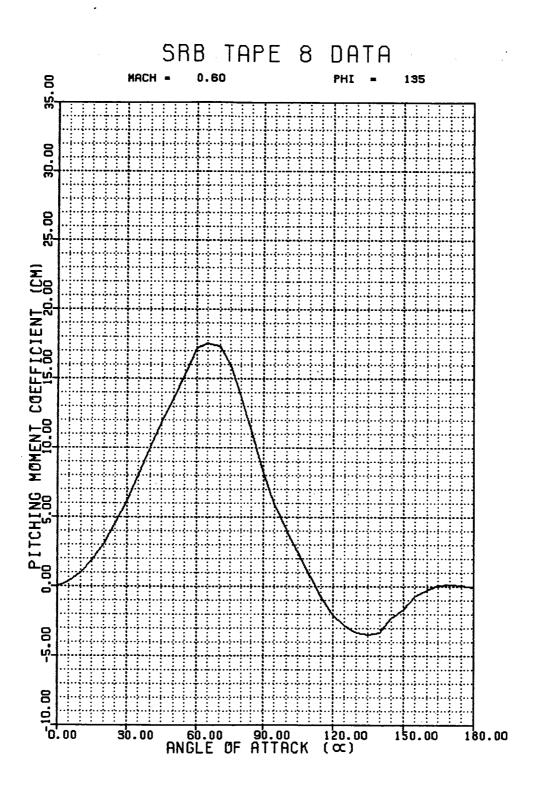


B-173

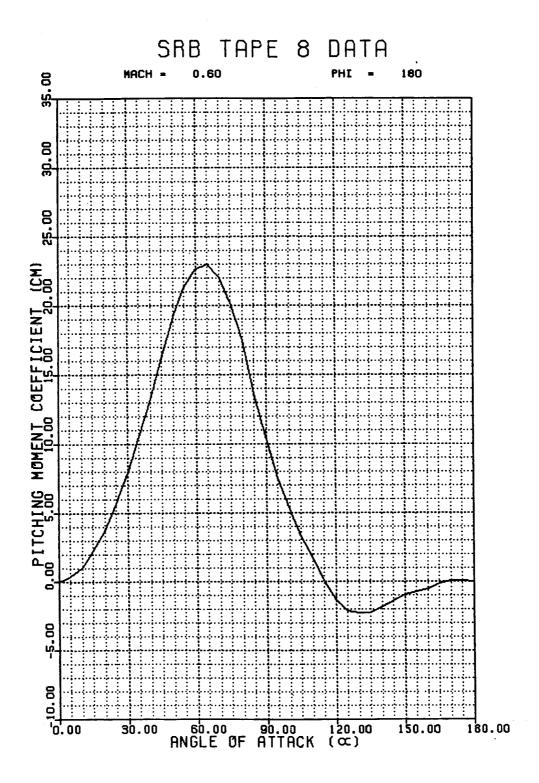
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-174
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

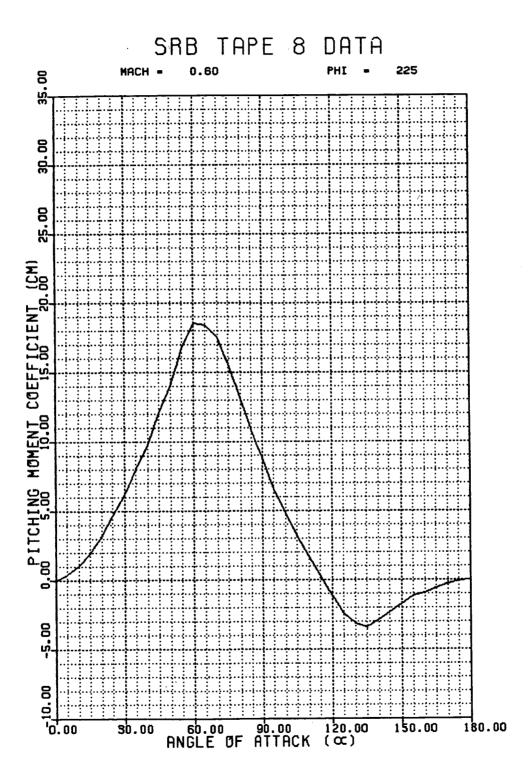


B-175
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

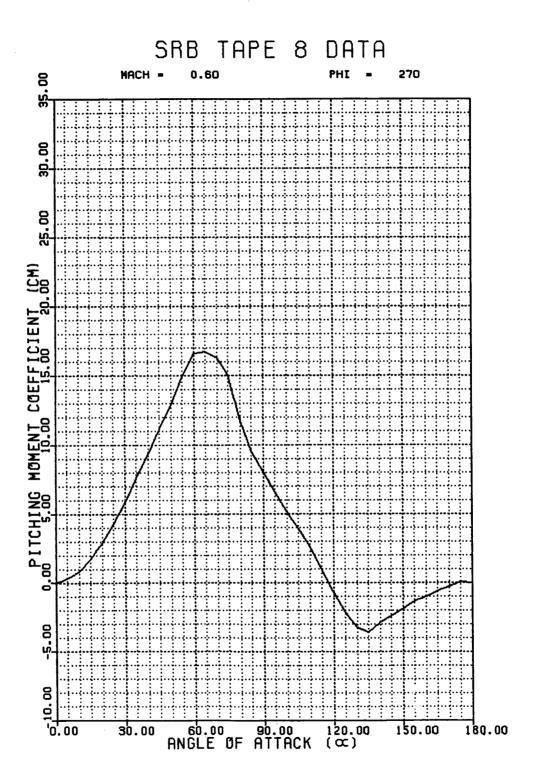


B-176

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

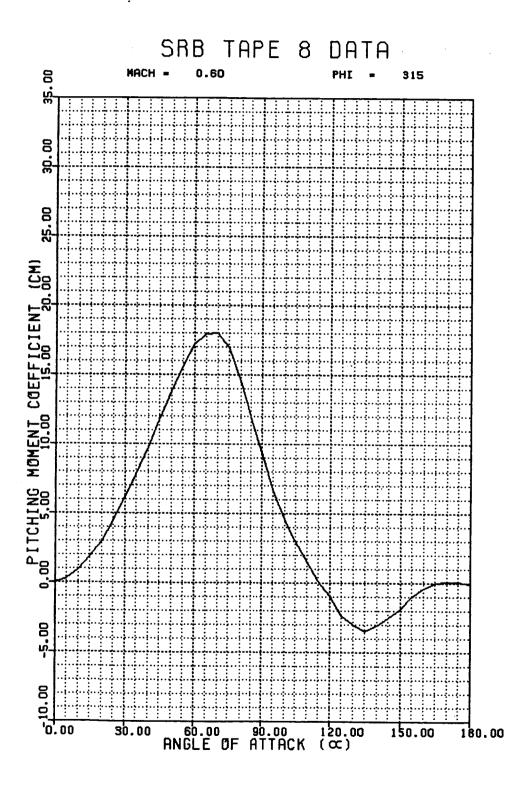


B-177
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

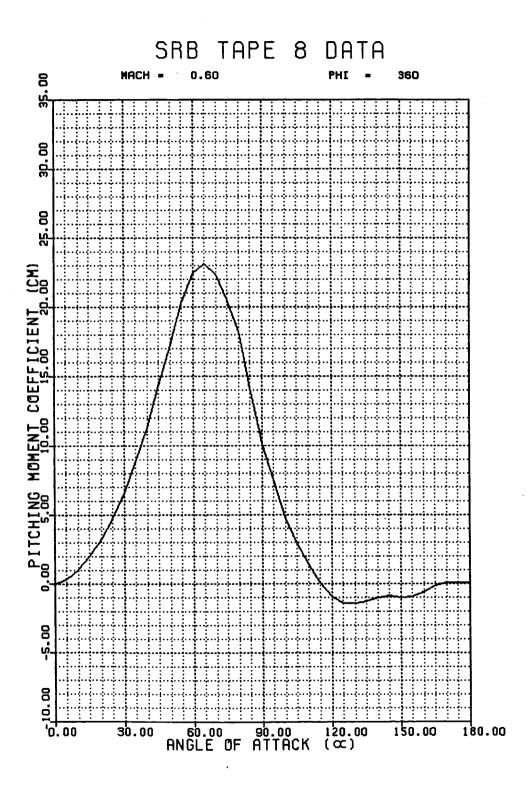


B-178

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

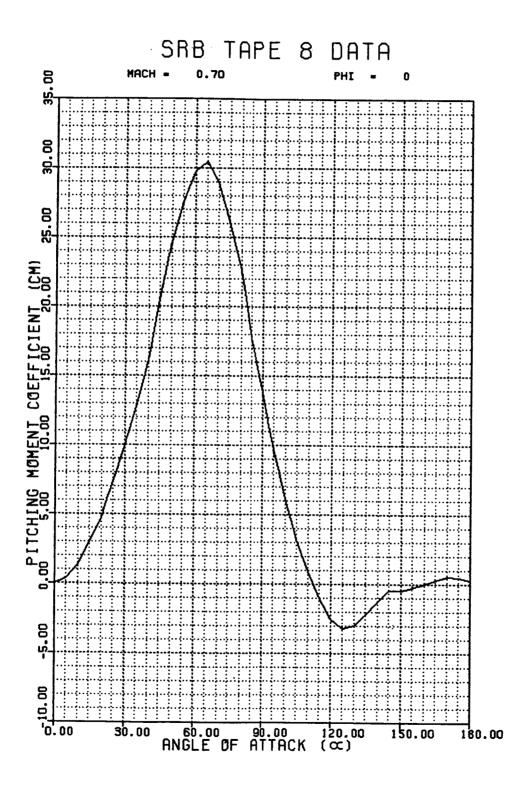


B-179
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

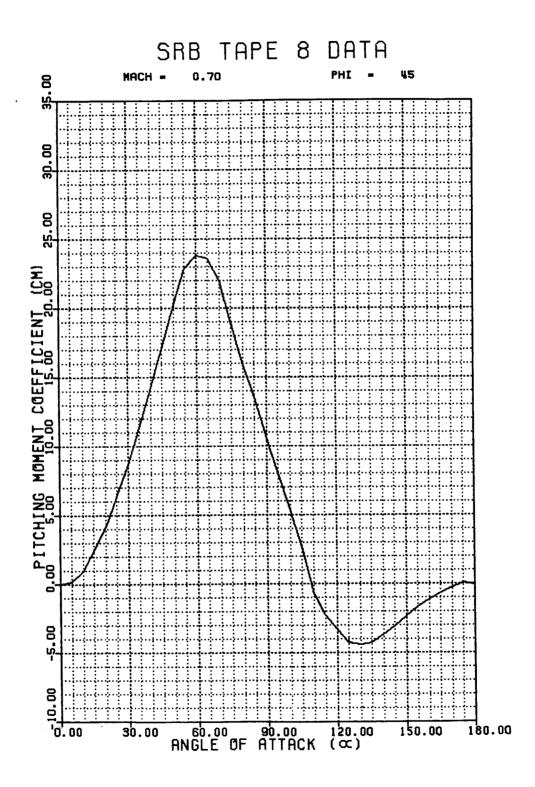


B-180

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

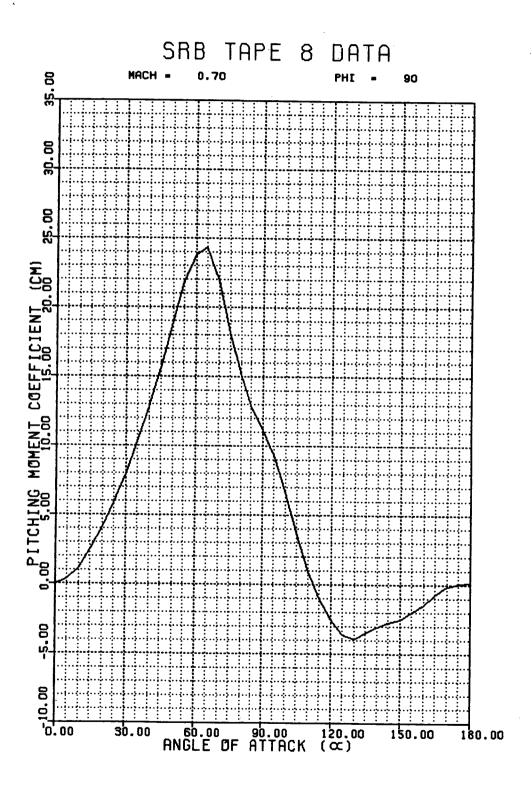


B-181

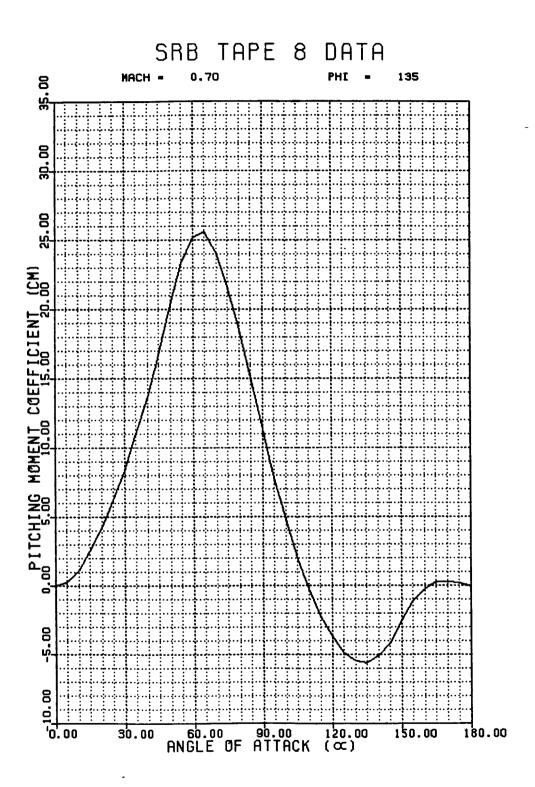


B-182

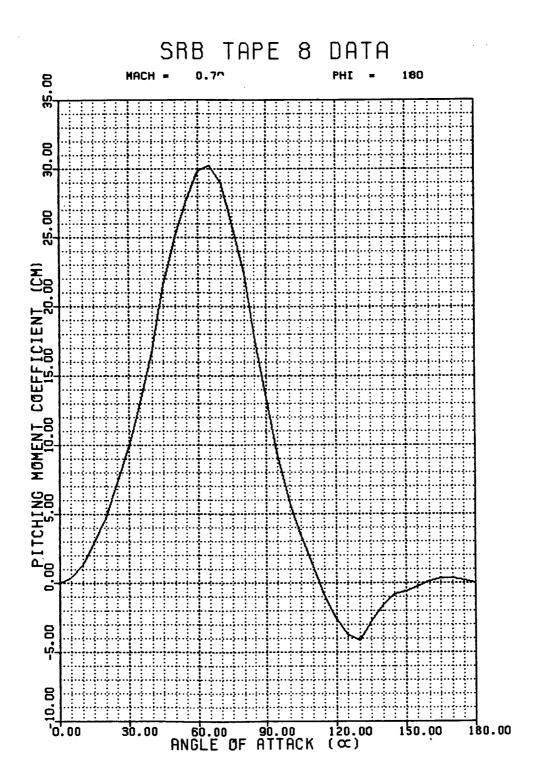
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



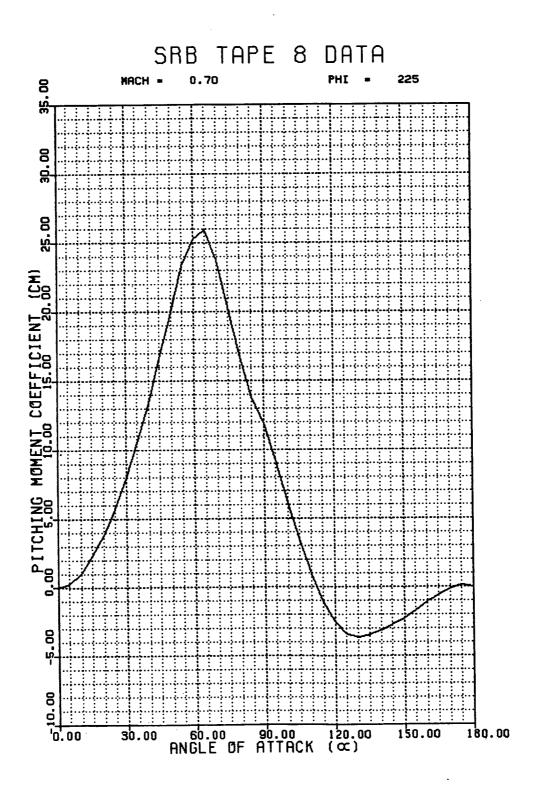
B-183



B-184
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

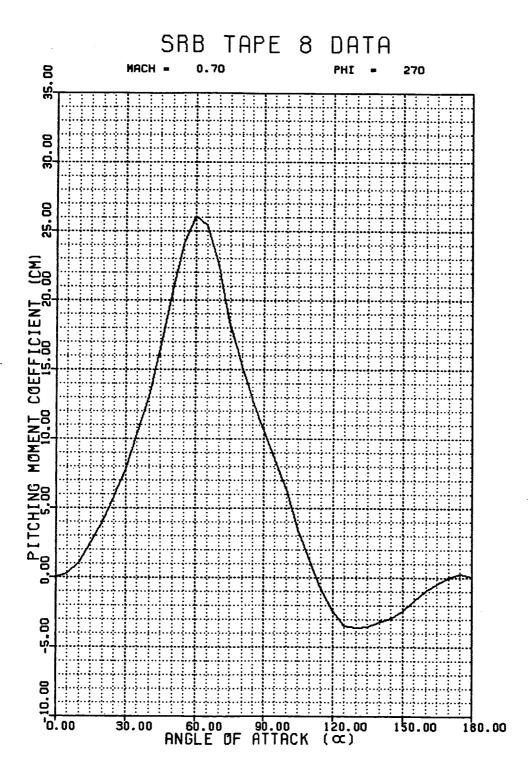


B-185

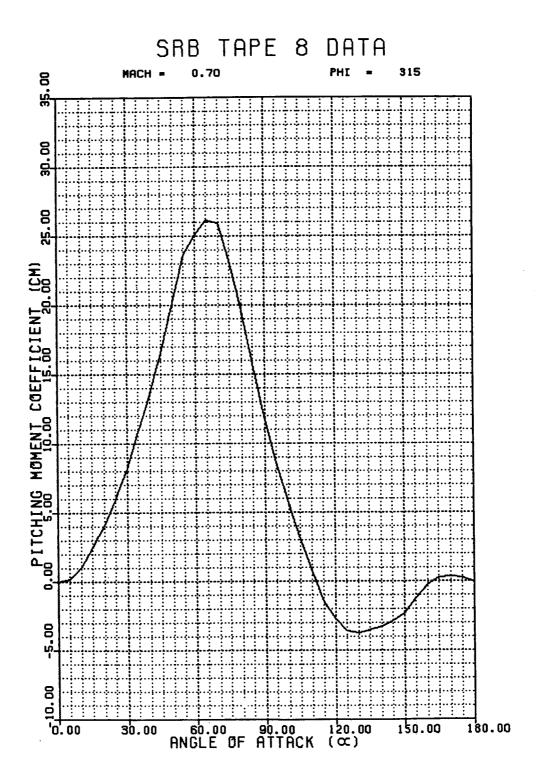


B-186

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

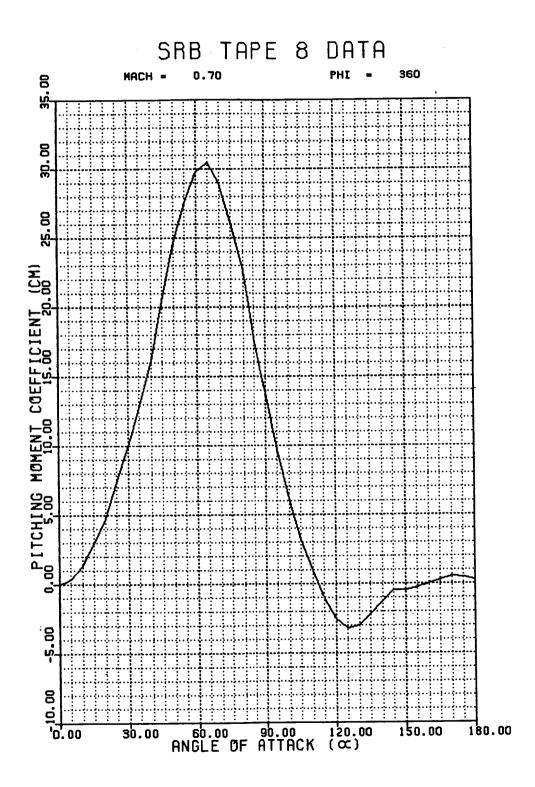


B-187



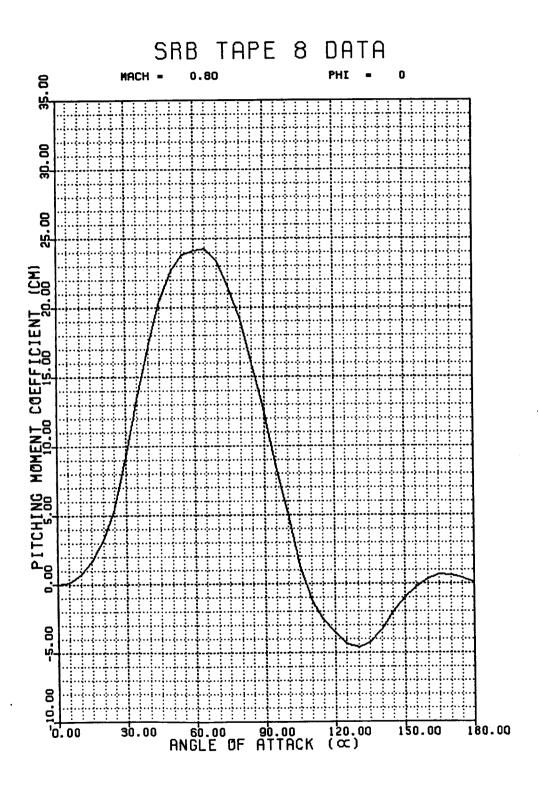
B-188

(-3

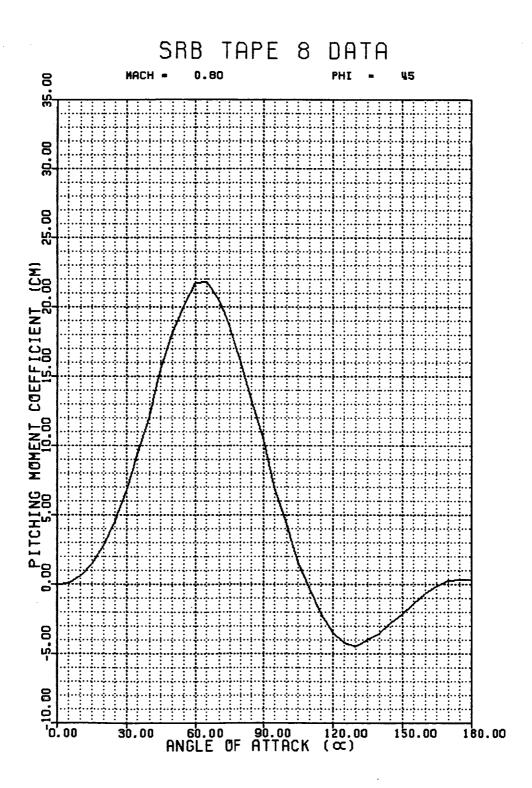


B-189

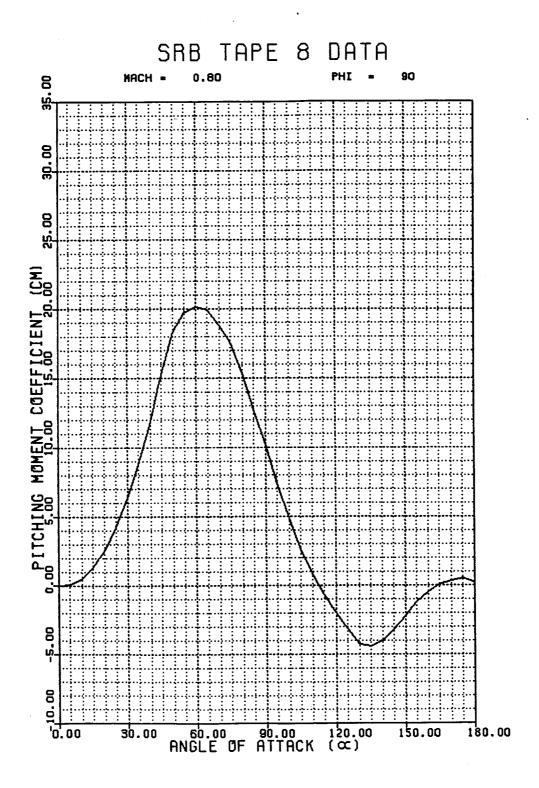
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-19Q
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

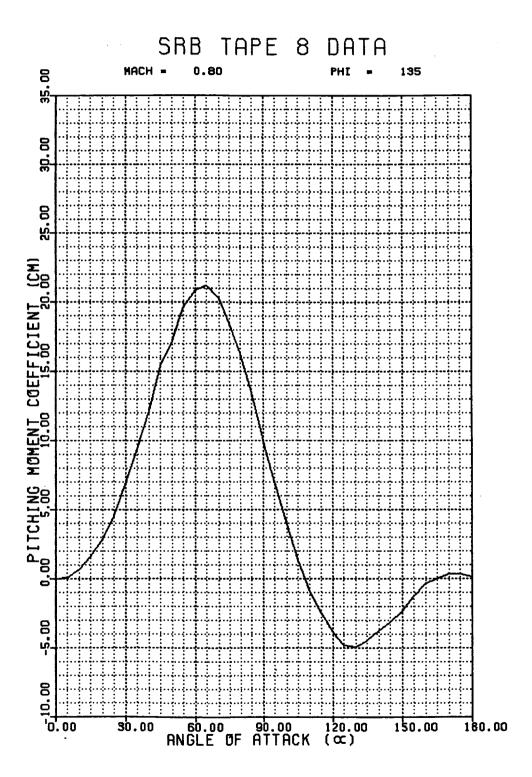


B-191
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

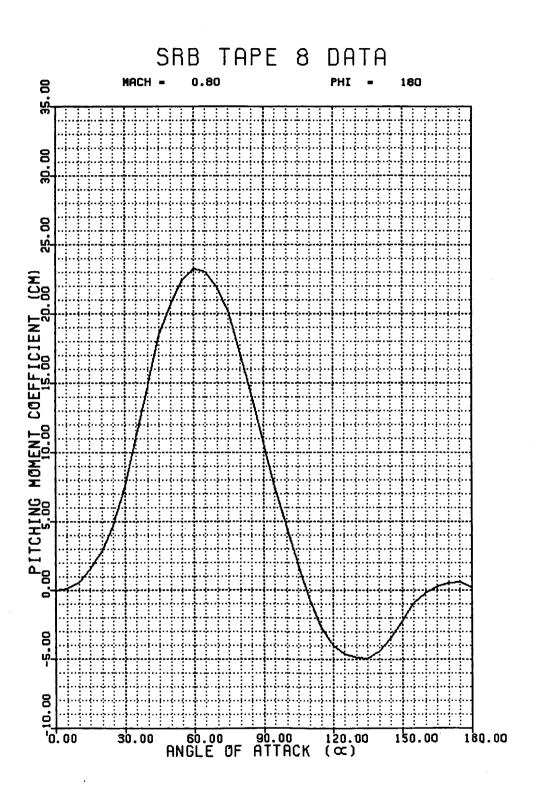


B-192

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

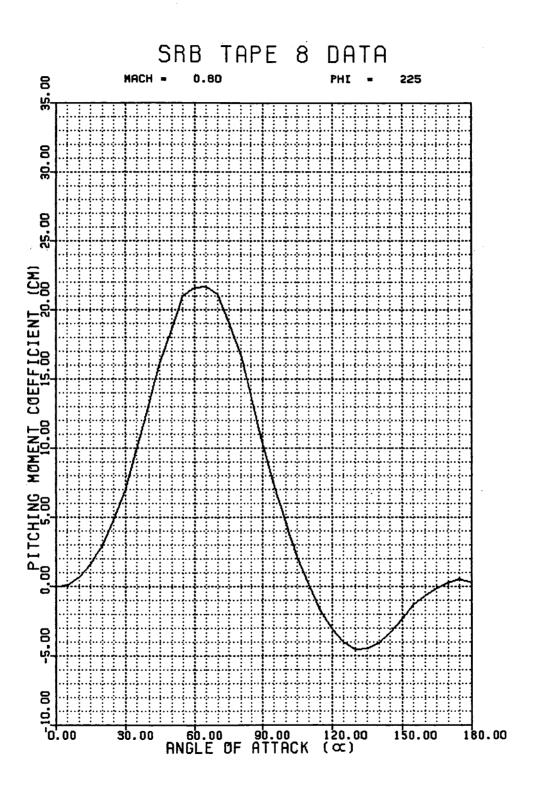


B-193

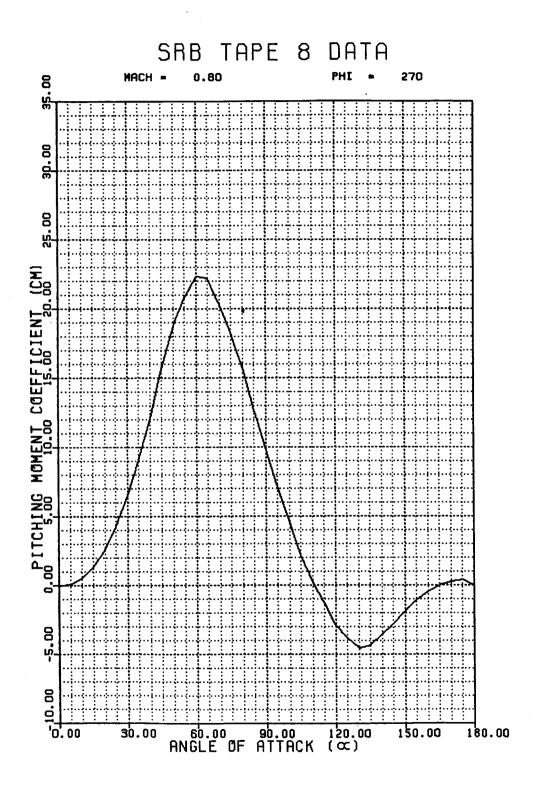


B-194

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

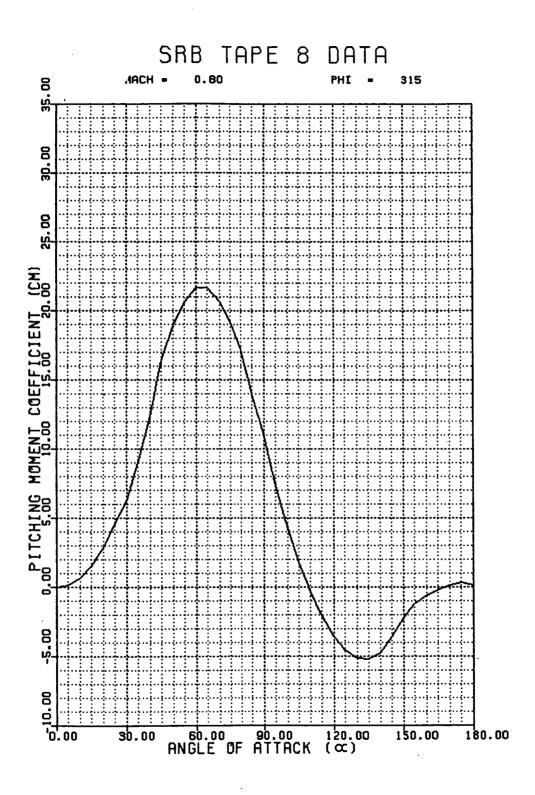


B-195
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



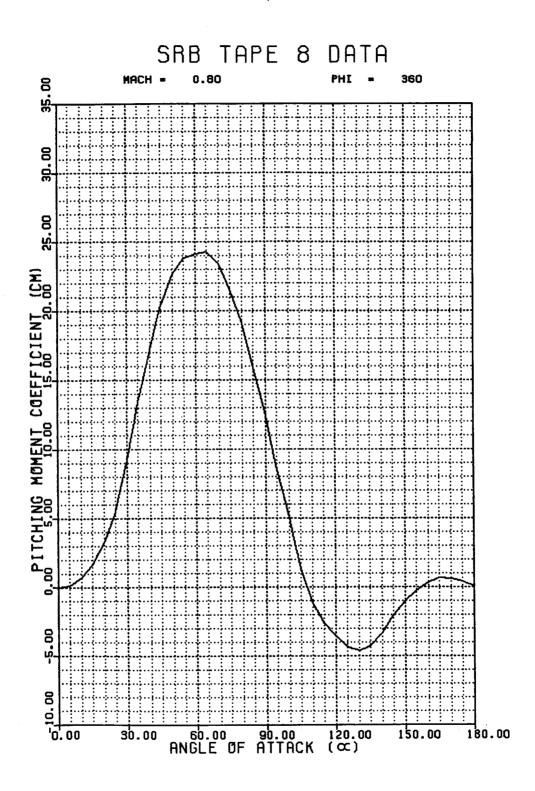
8-196

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



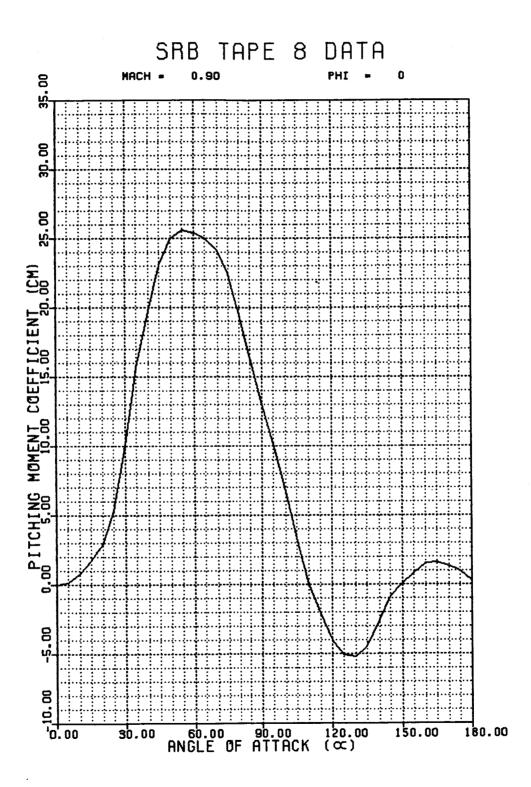
B-197

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

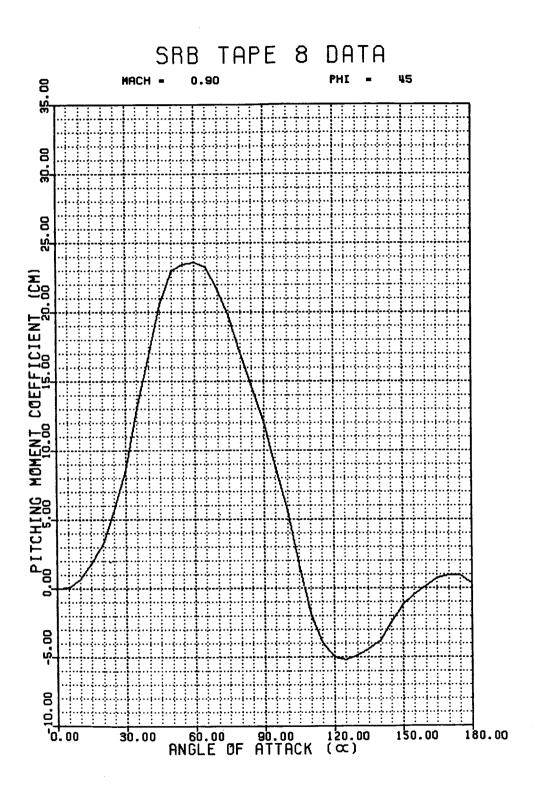


B-198

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

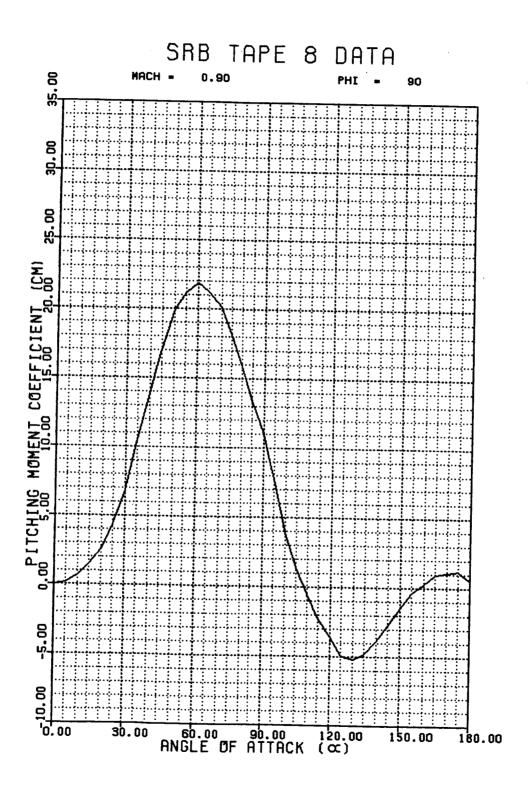


B-199

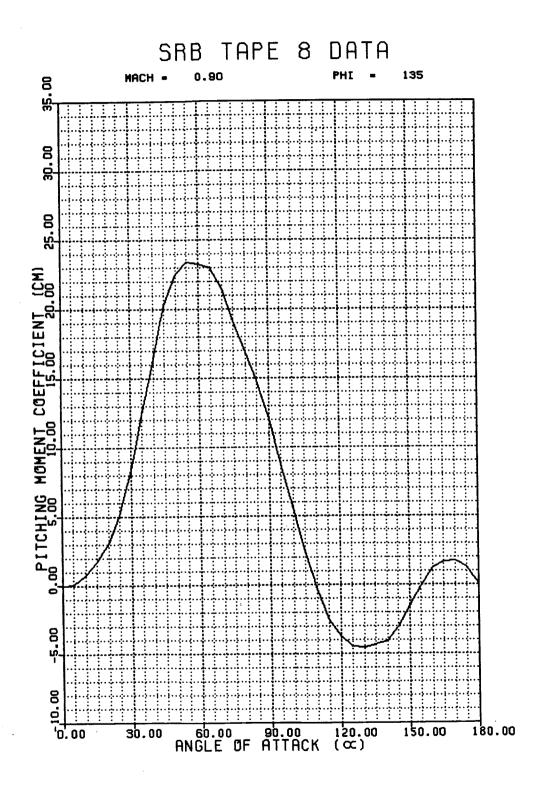


B-200

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

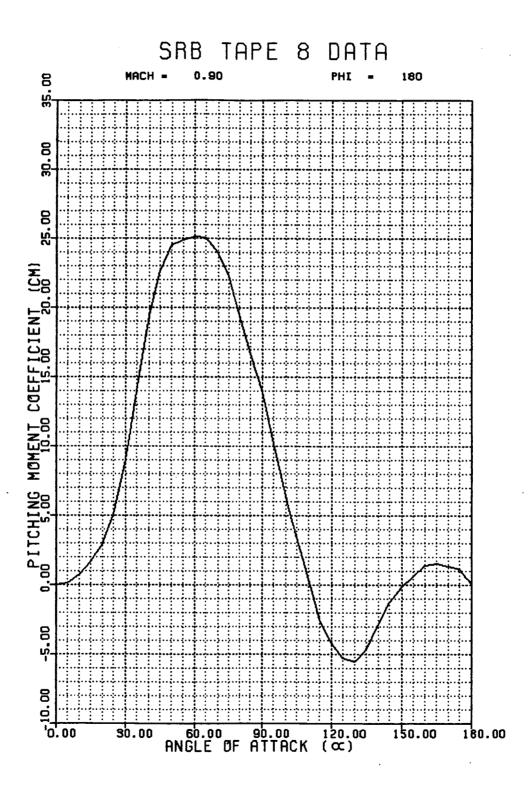


B-201

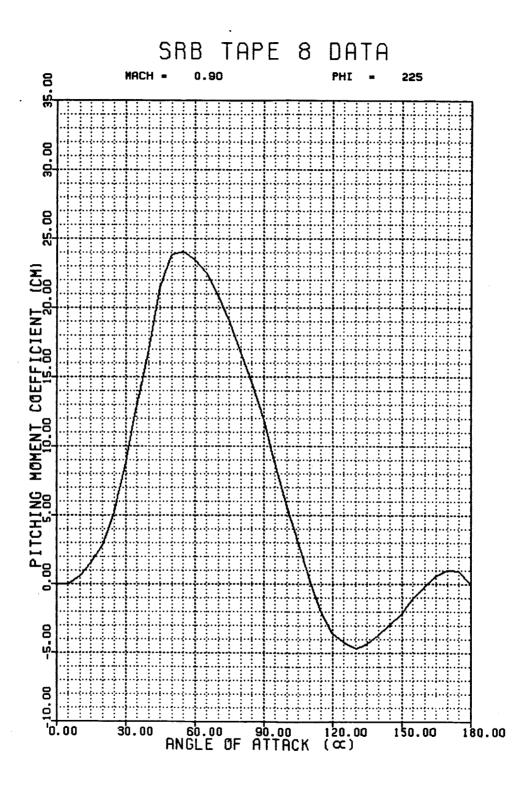


B-202

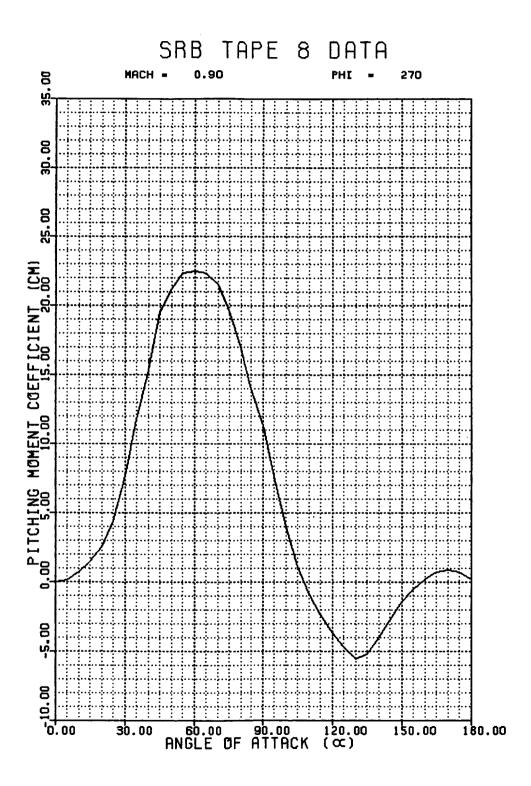
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



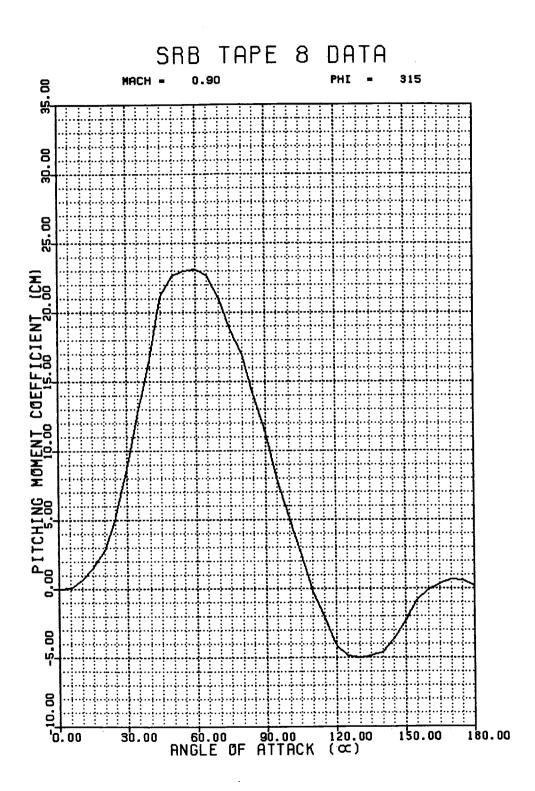
B-203



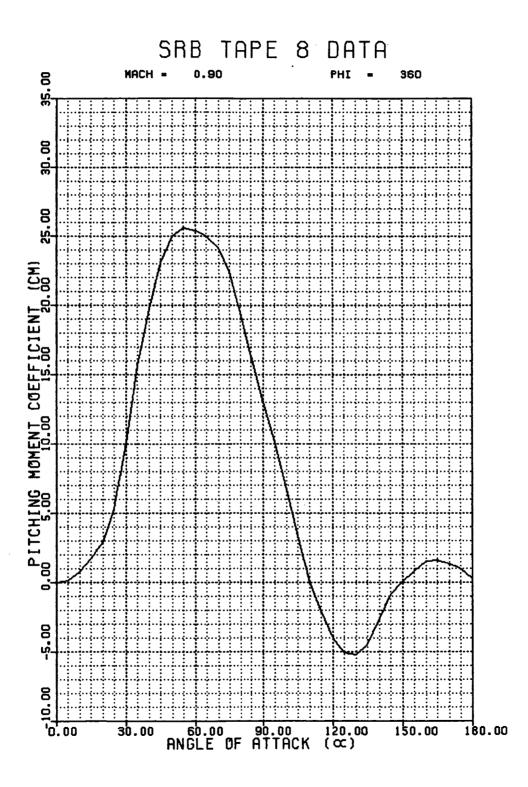
B-204
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-205
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

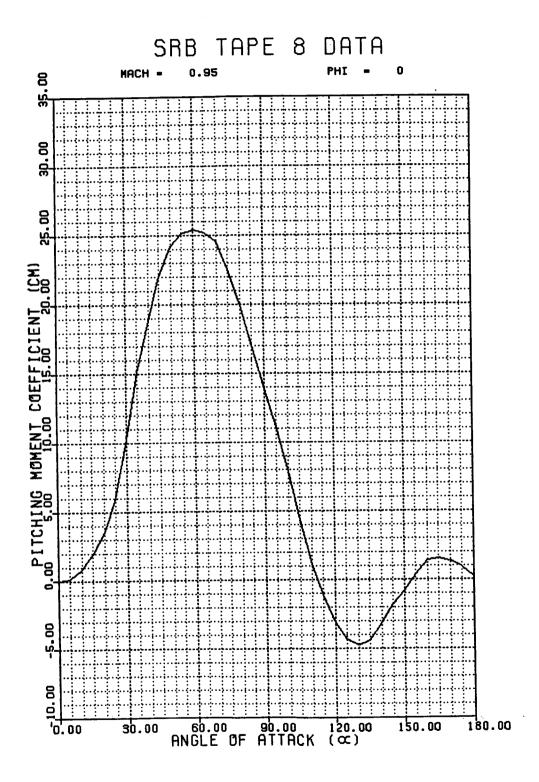


B-206
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



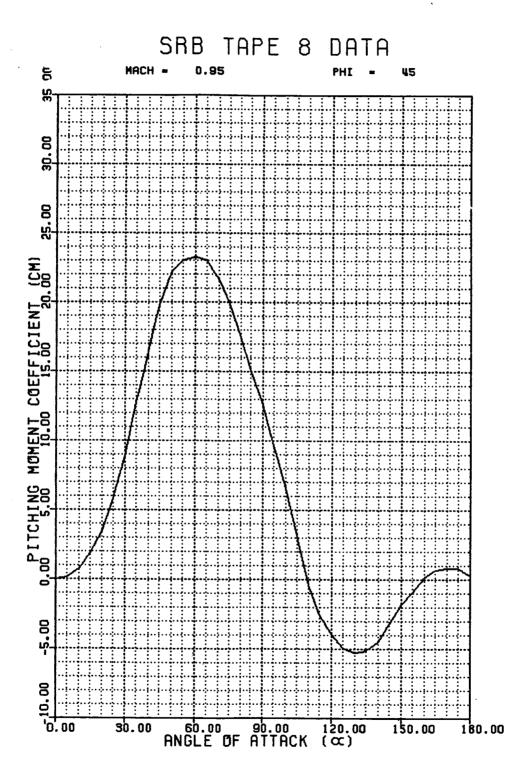
B-207

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

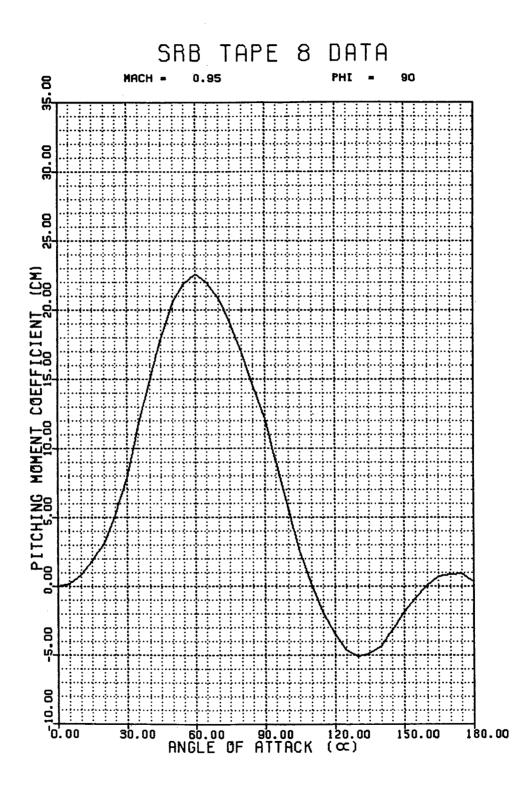


B-208

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

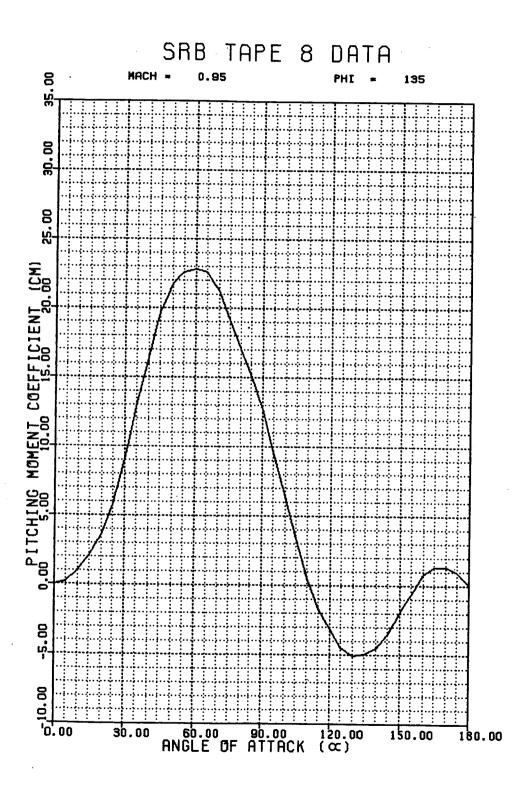


B-209

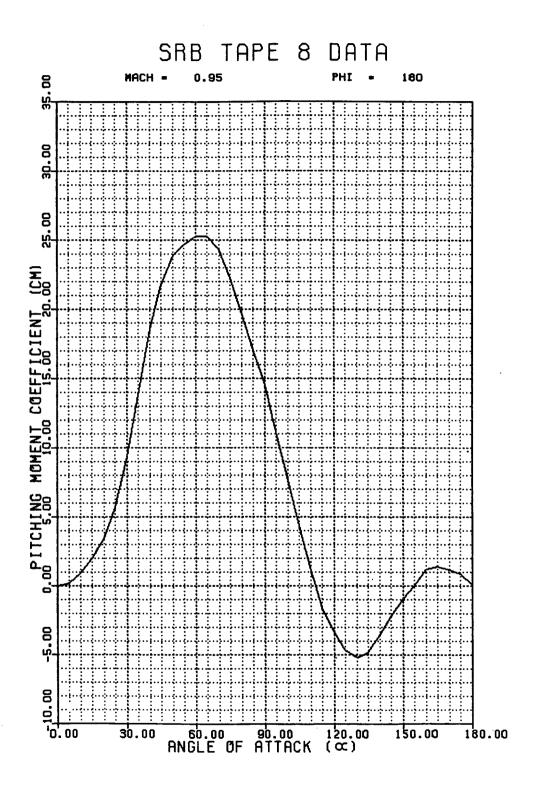


B-210

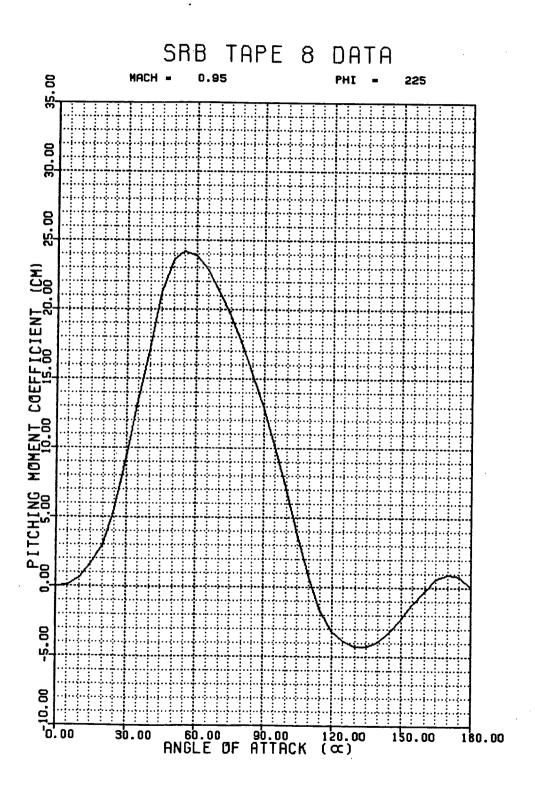
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



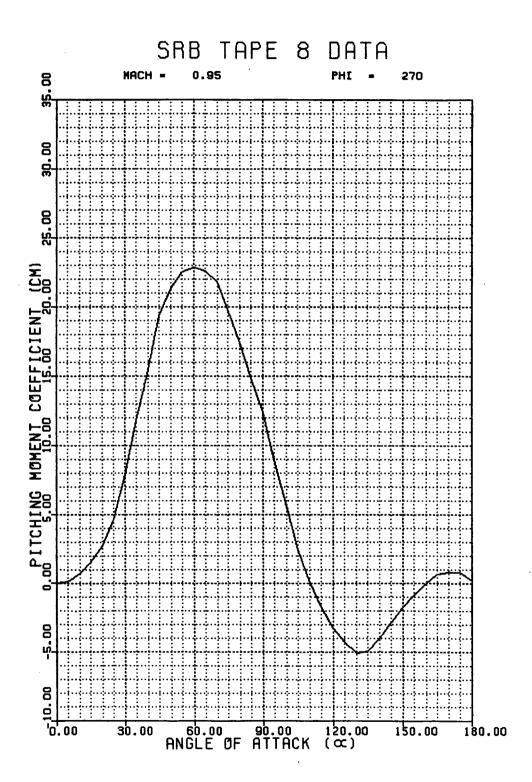
B-211



B-212
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

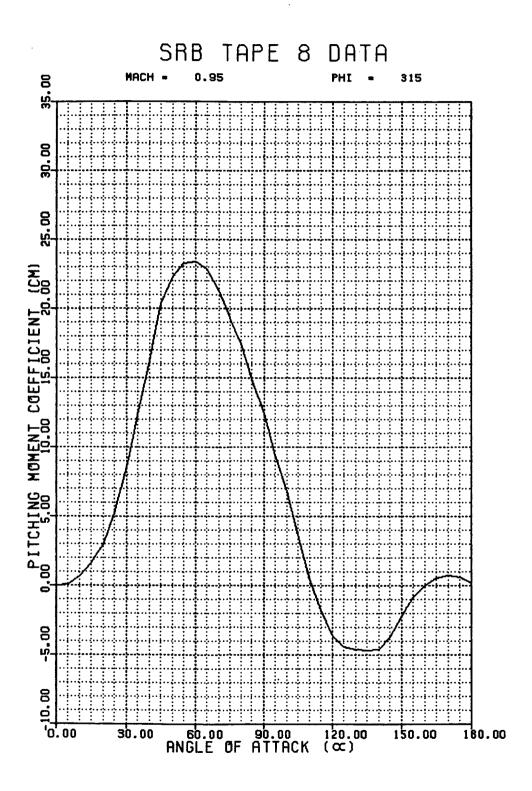


B-213



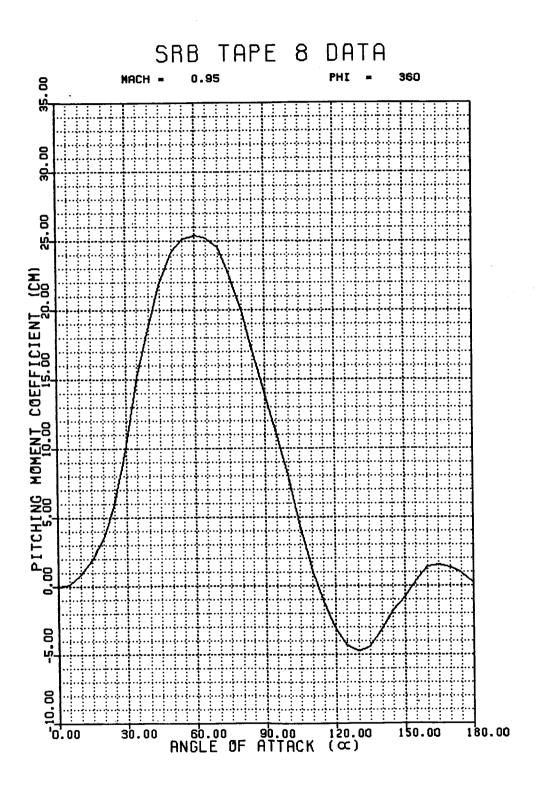
B-214

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



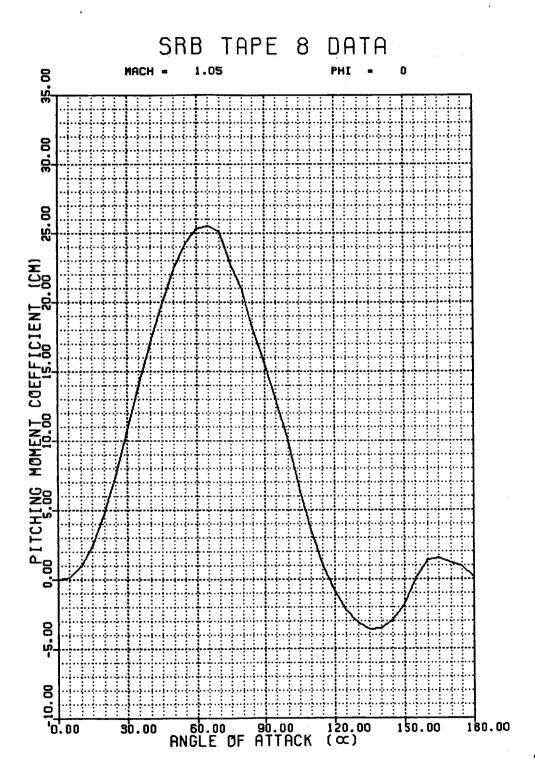
B-215

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

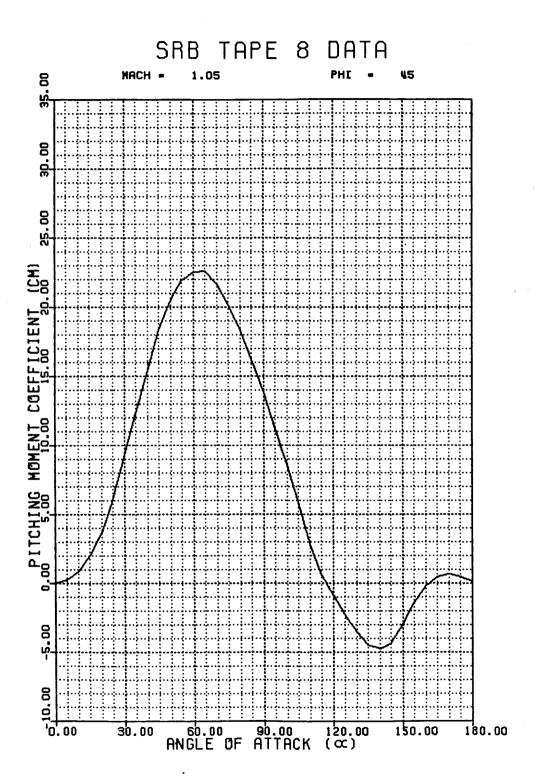


B-216

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

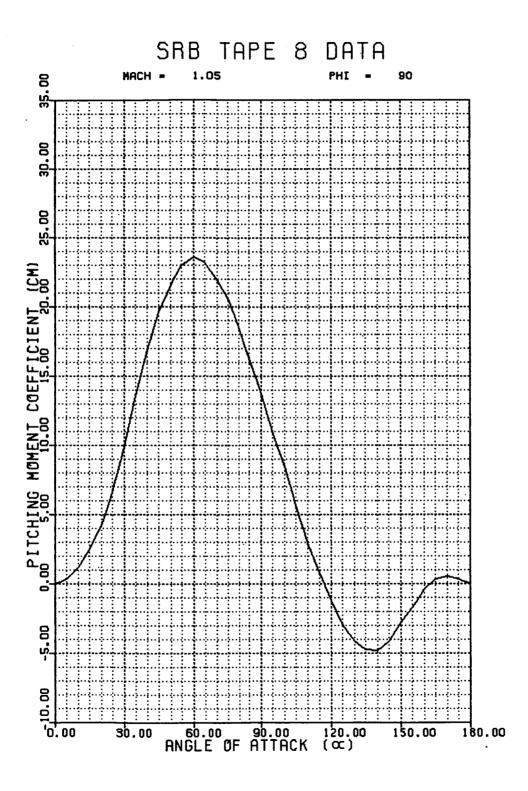


B-217



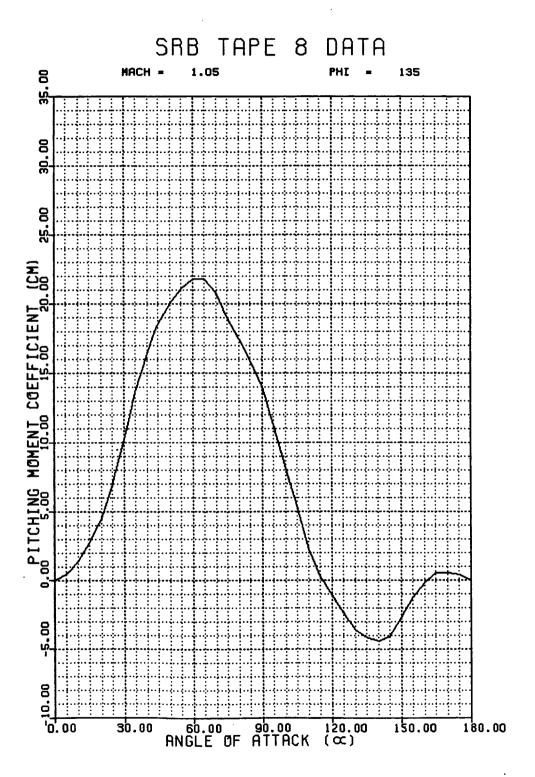
B-218

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

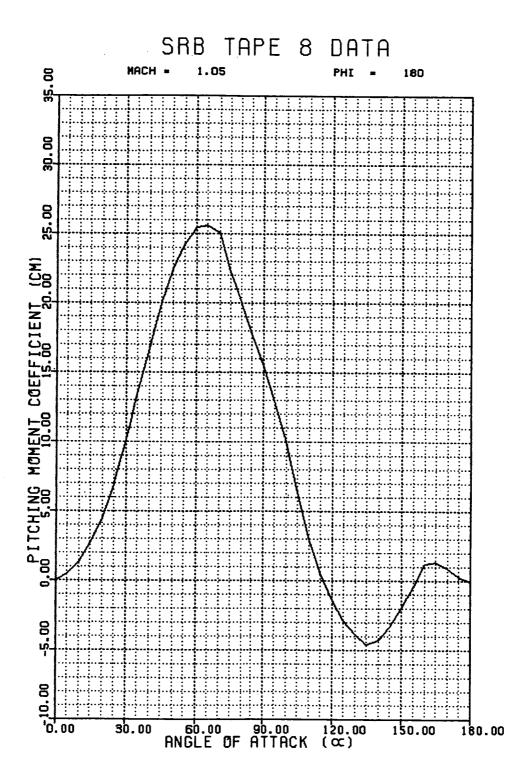


B-219

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

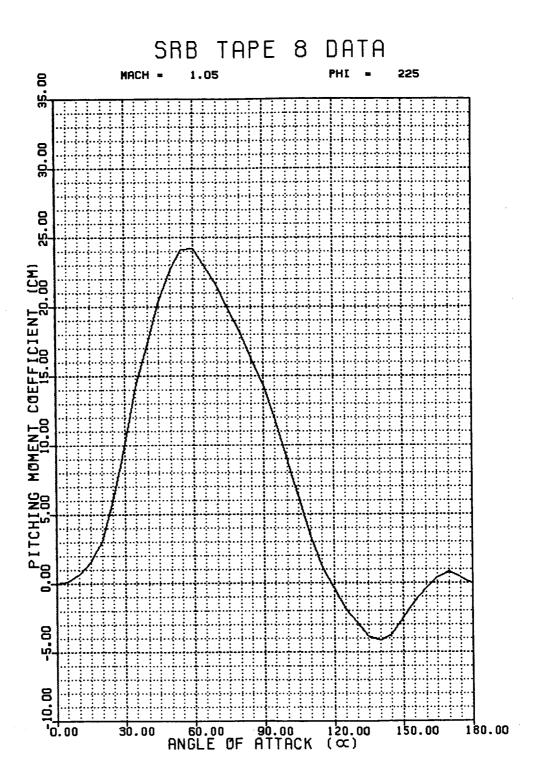


B-220
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

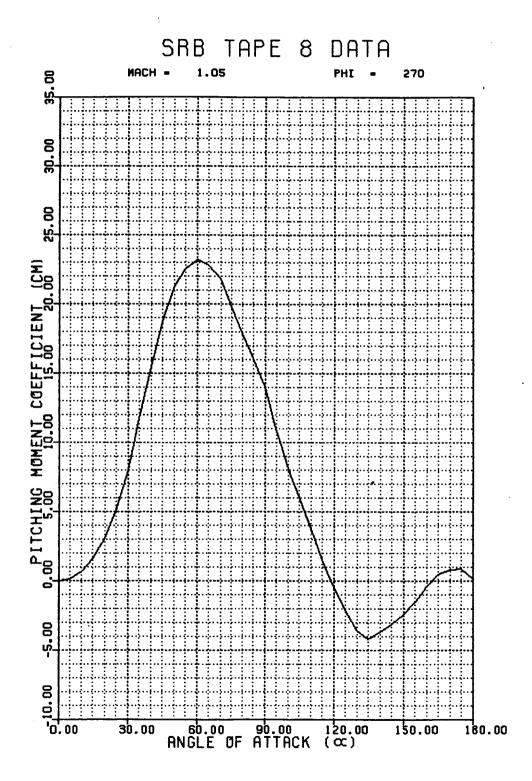


B-221

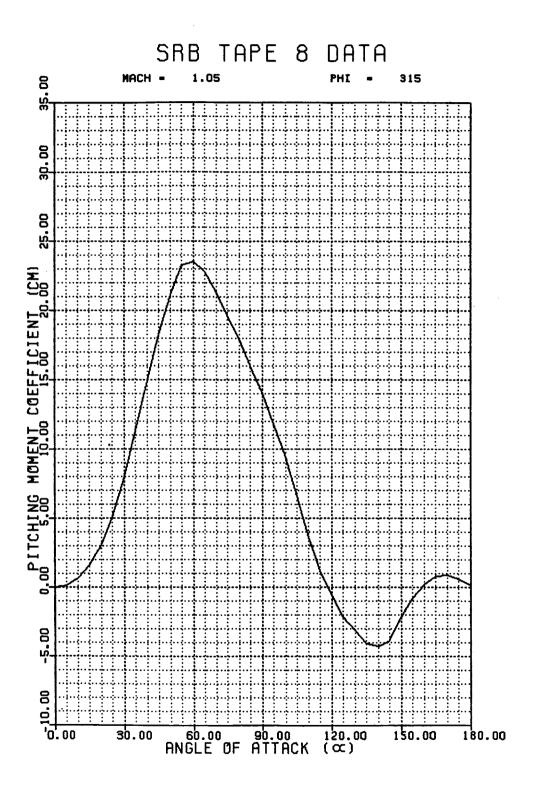
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



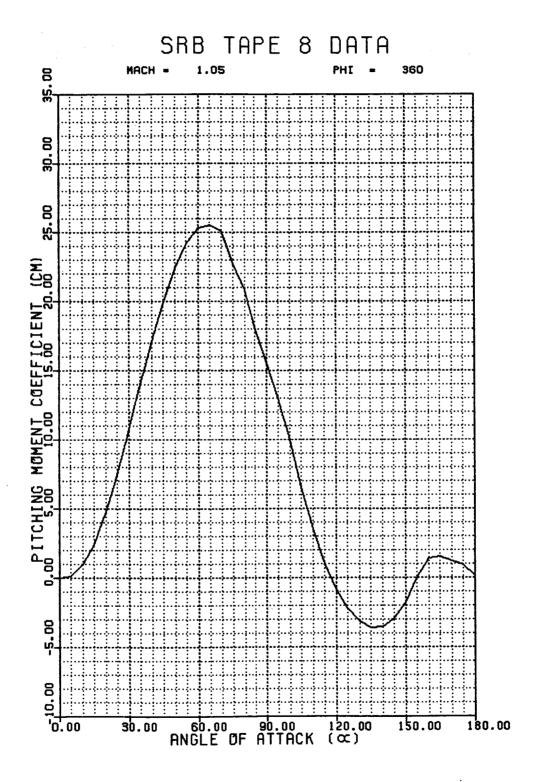
B-222
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-223

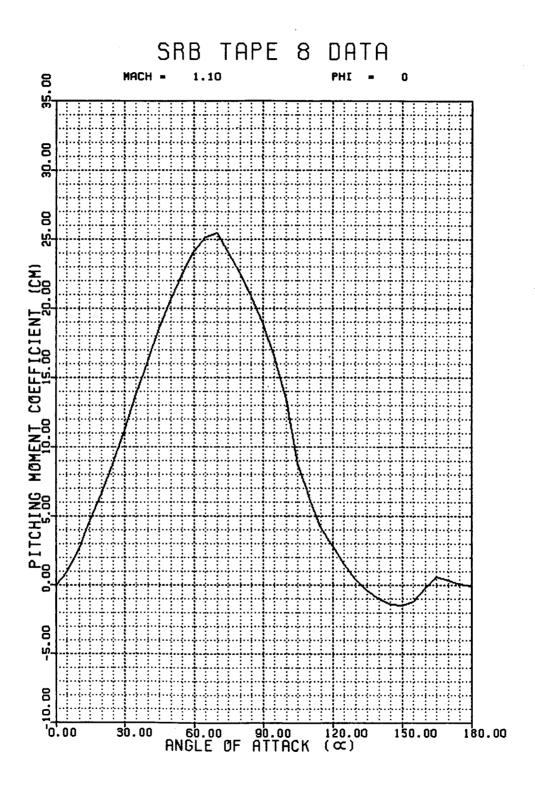


B-224
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

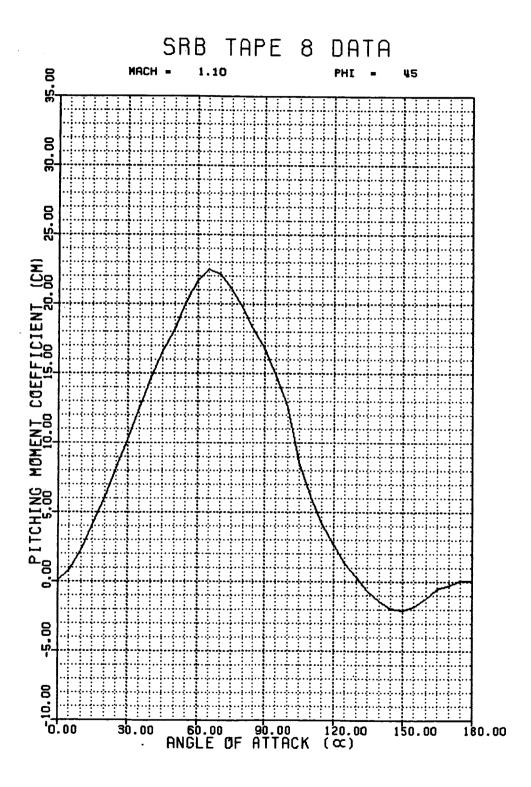


B-225

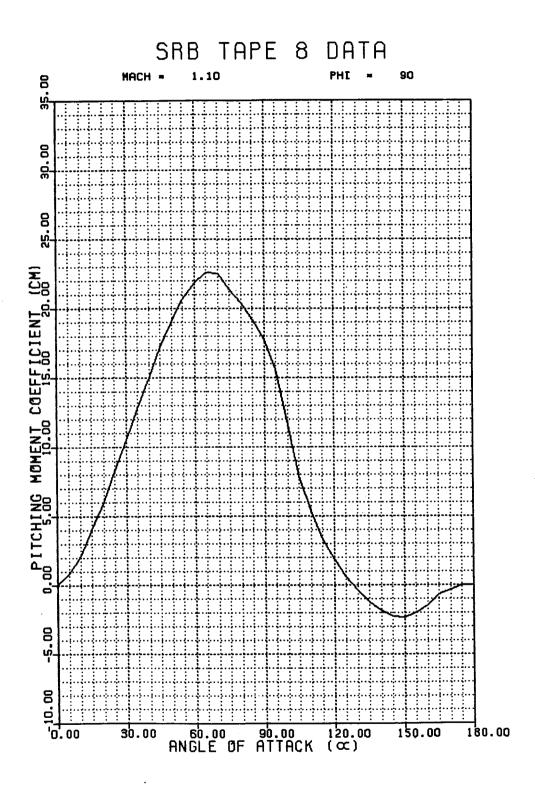
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



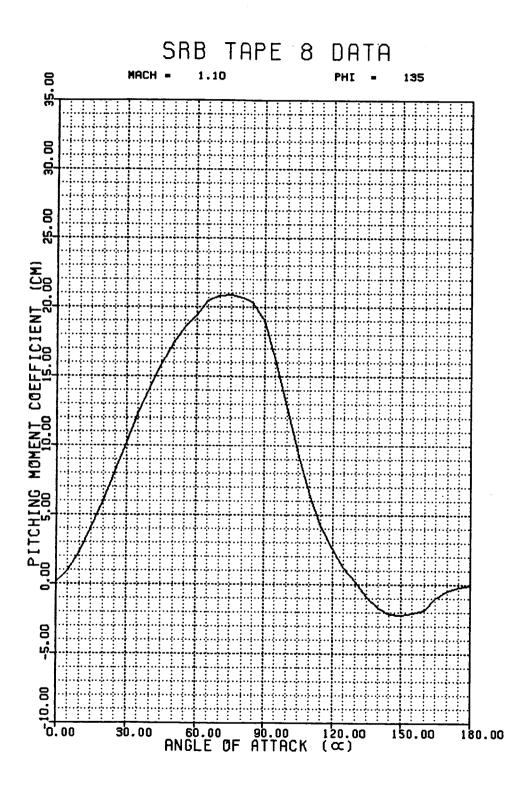
B-228
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



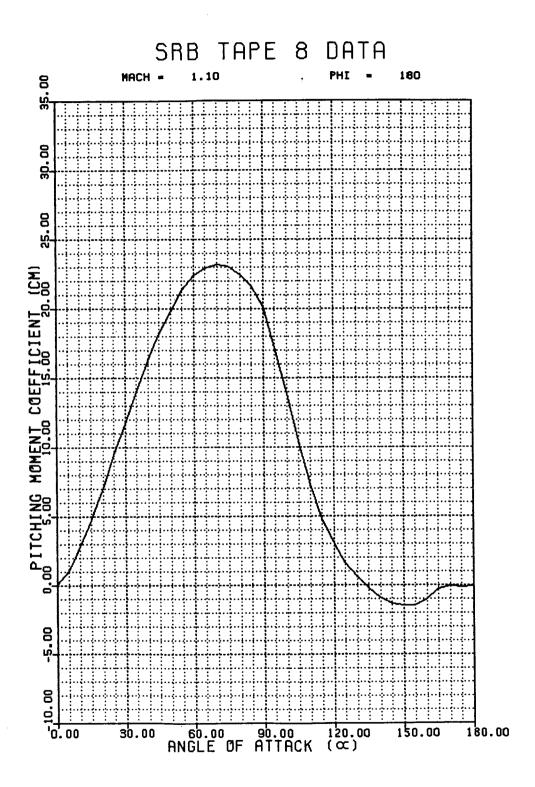
B-227



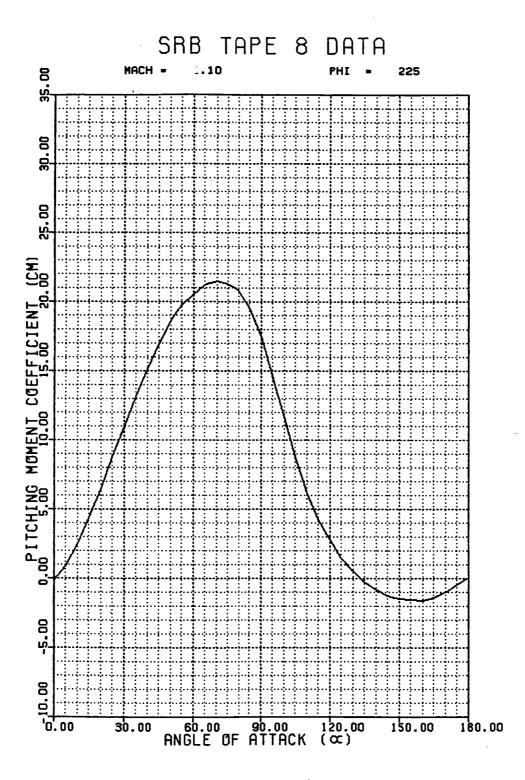
B-228
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-229

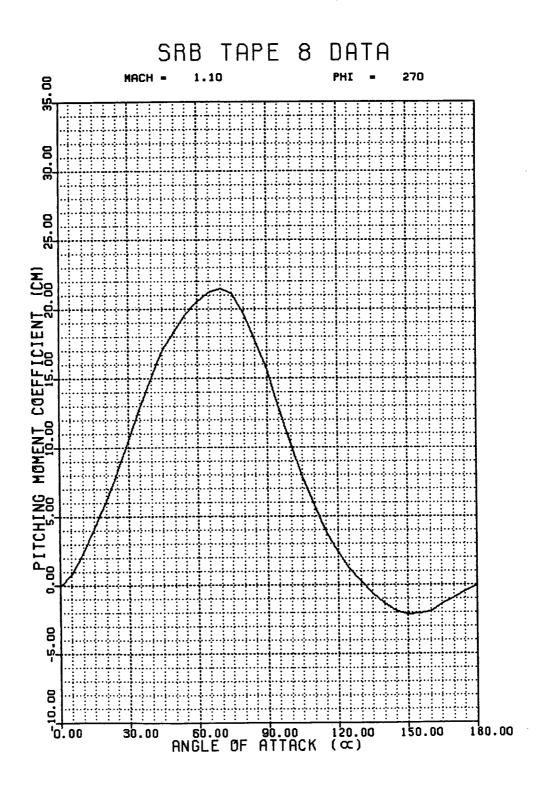


B-230
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

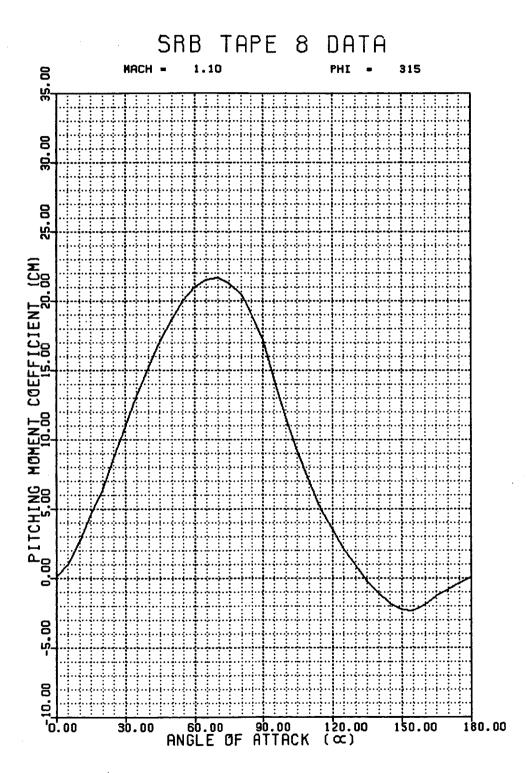


B-291

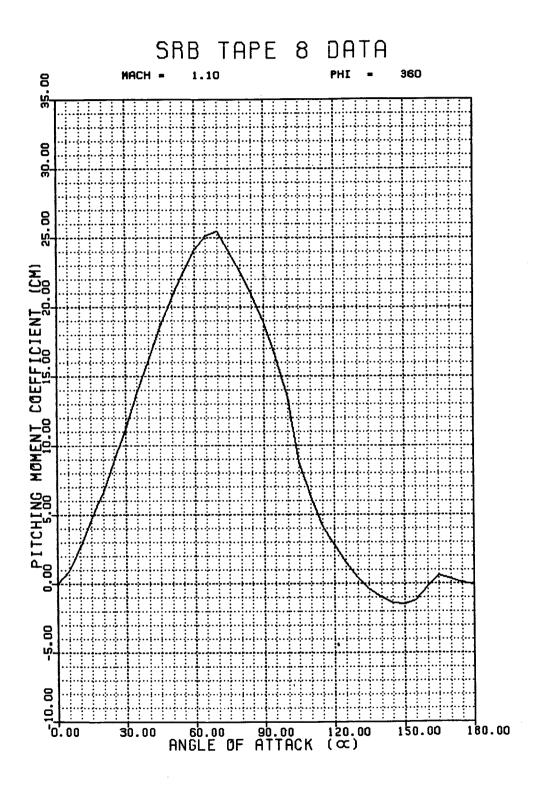
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



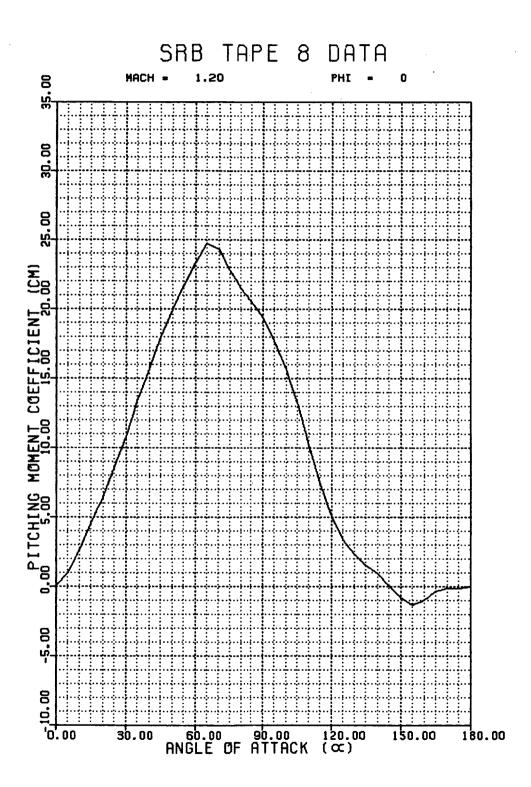
B-292
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



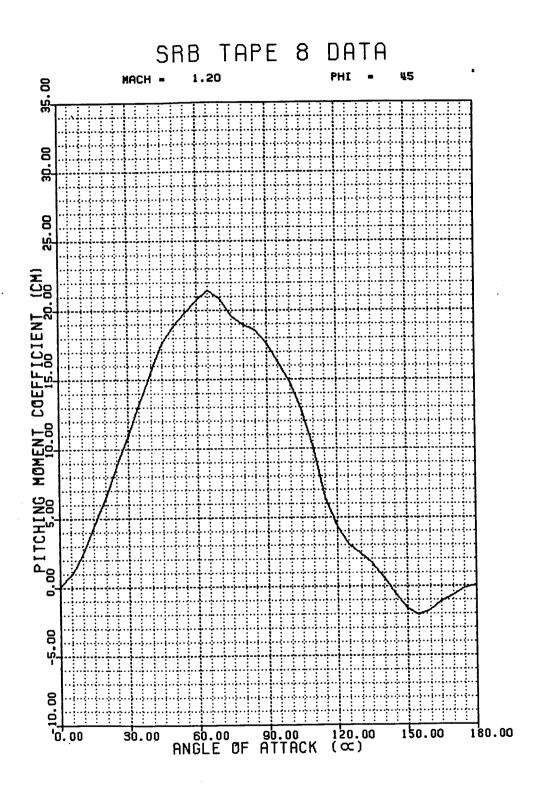
B-233



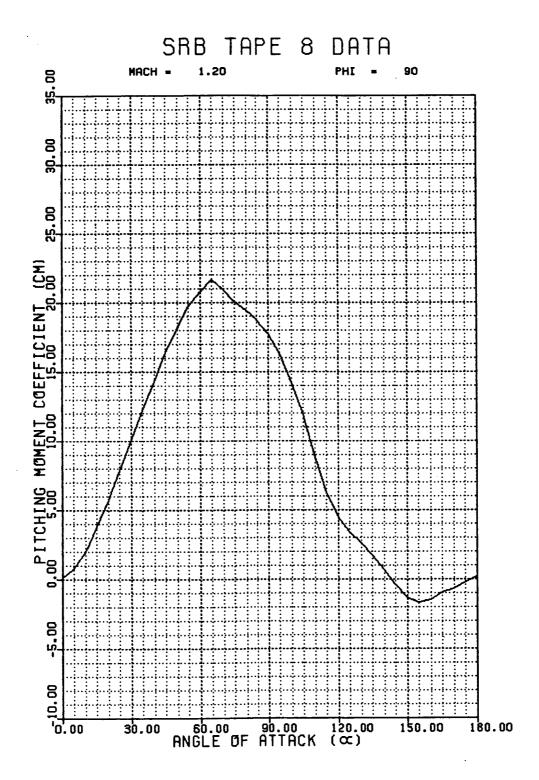
B-234
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-295

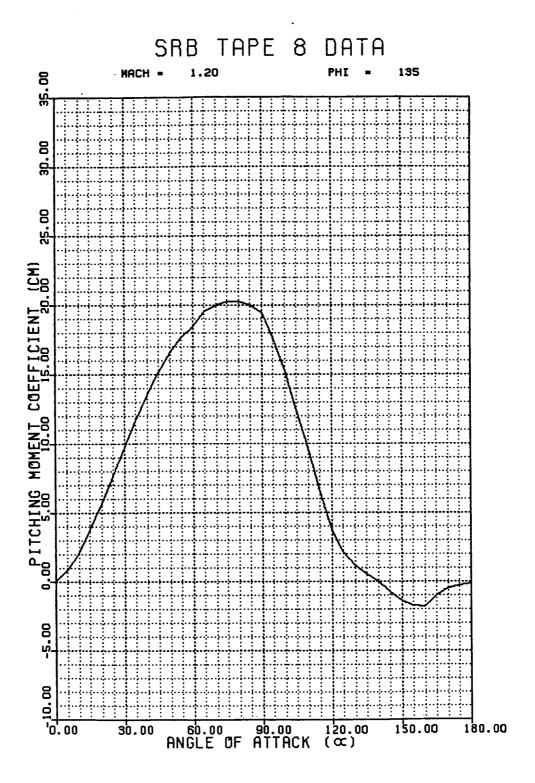


B-296
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



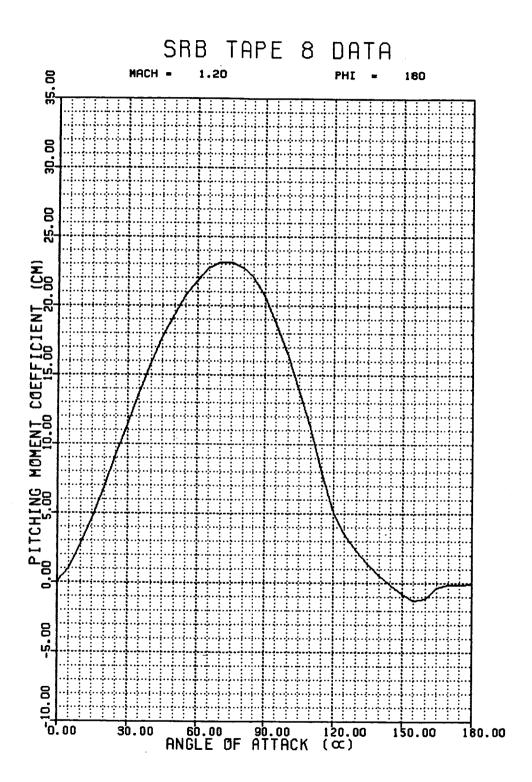
B-297

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

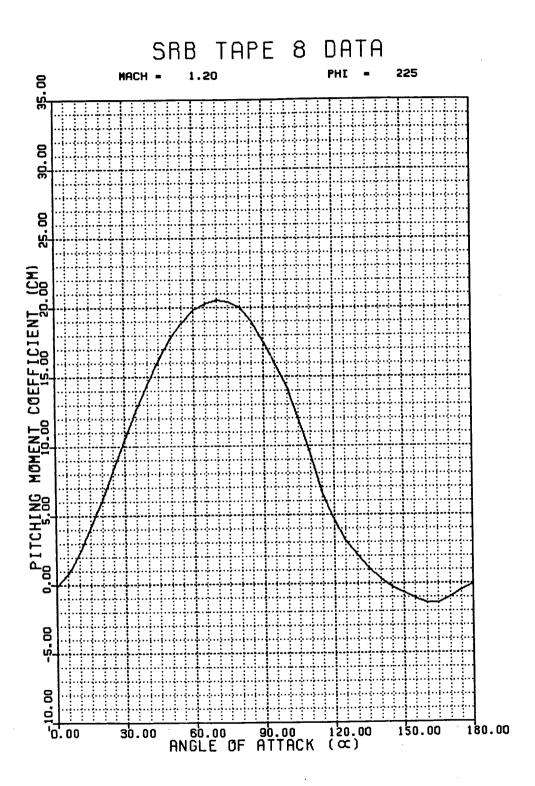


B-298

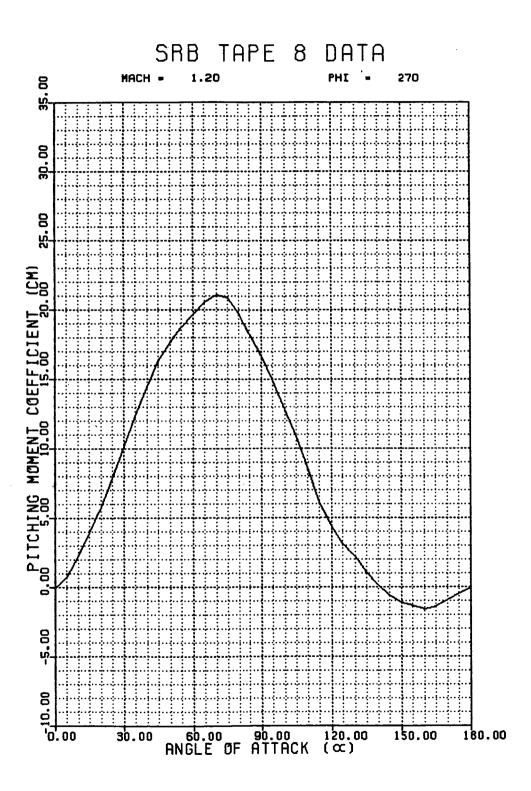
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-239

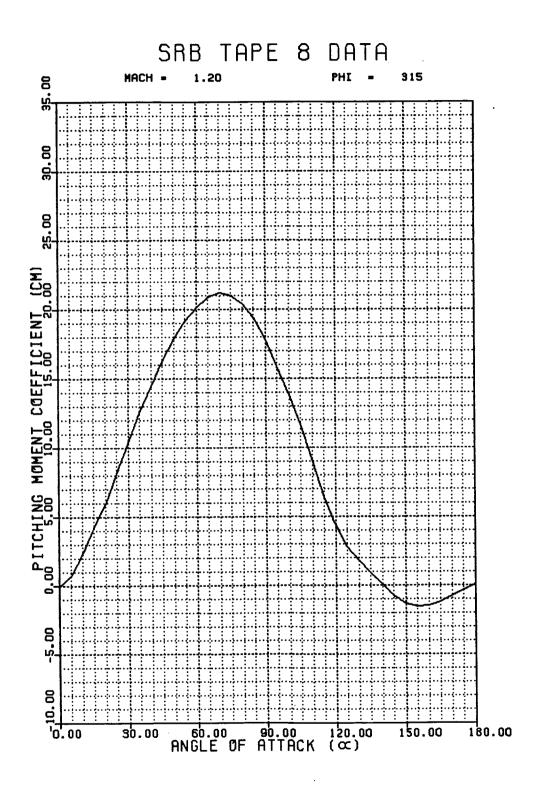


B-240
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

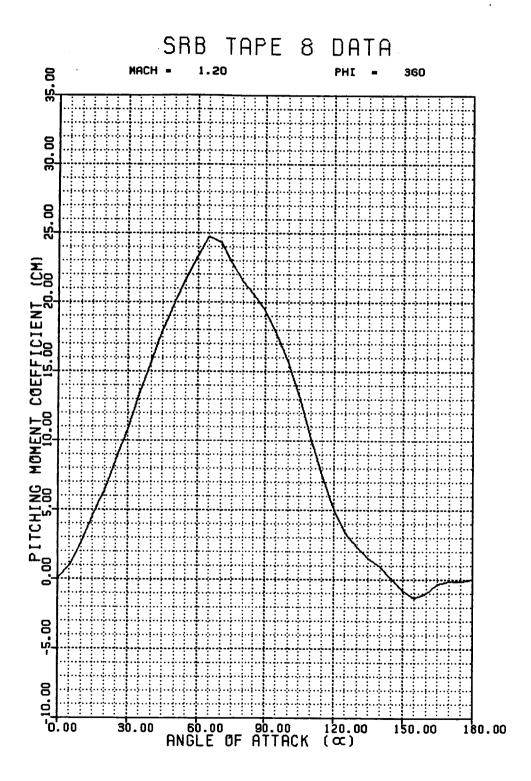


B-241

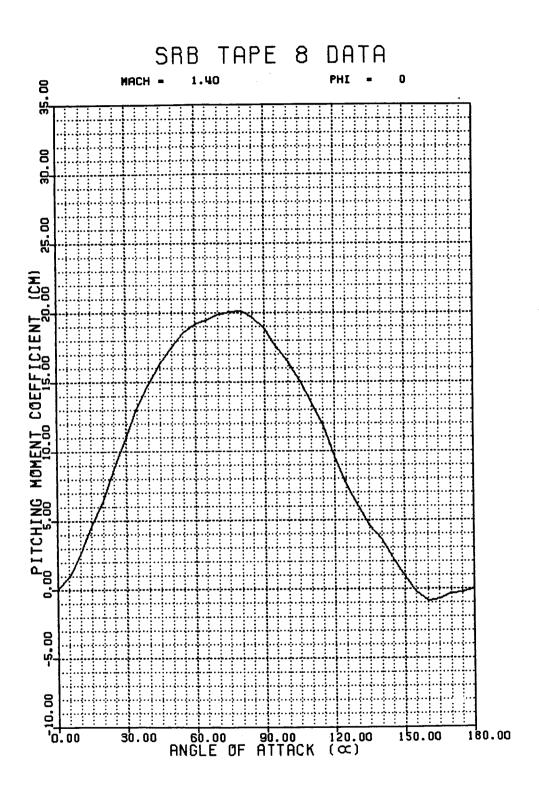
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



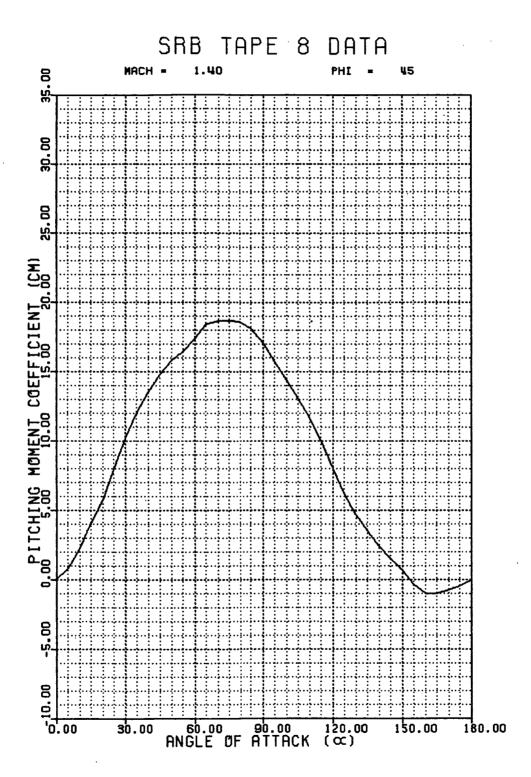
B-242
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



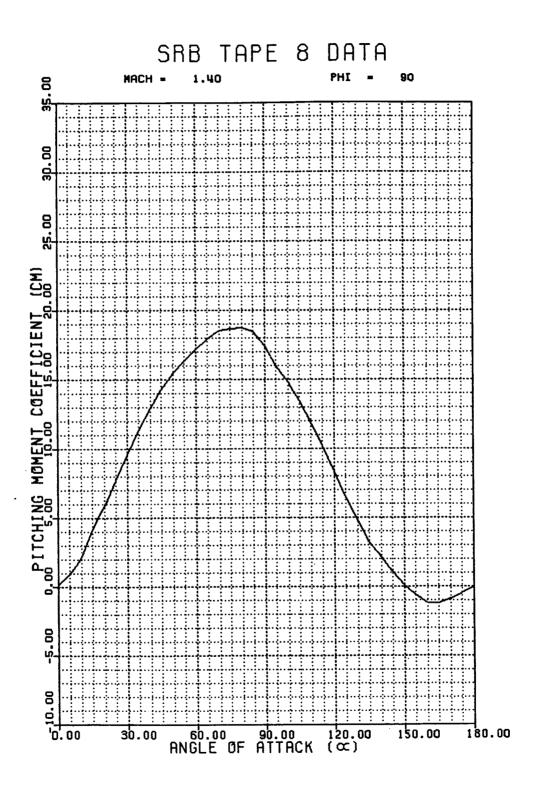
B-243



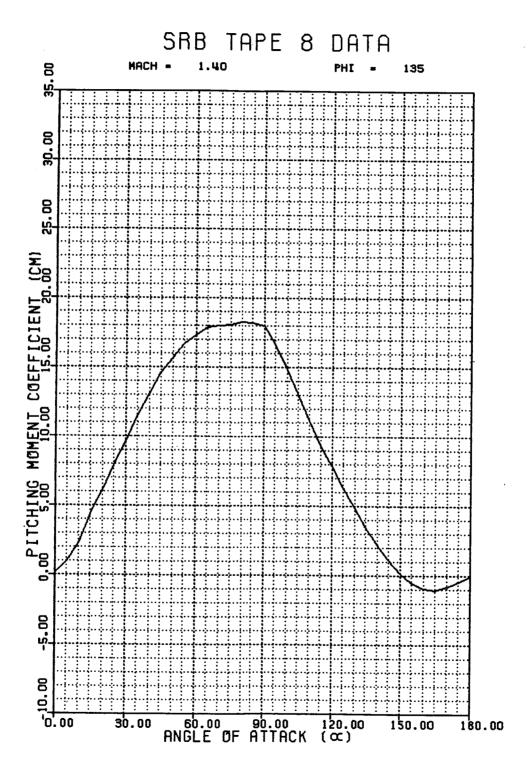
B-244
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



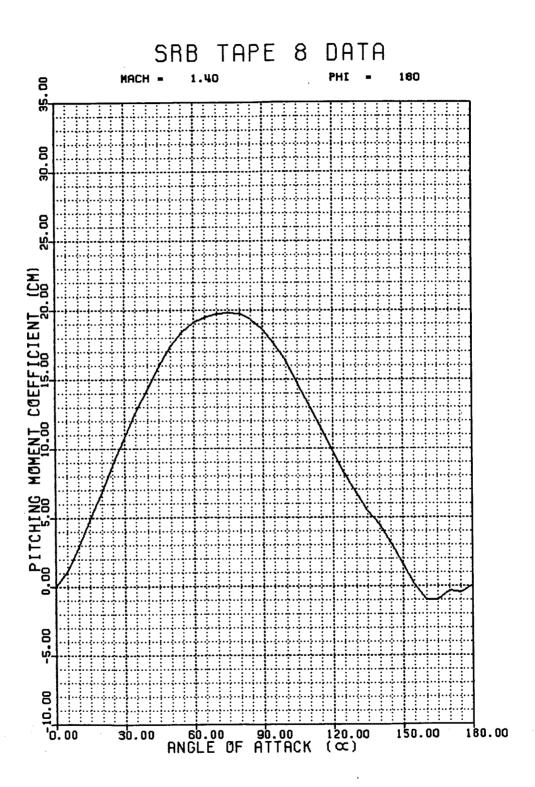
B-245
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-246
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

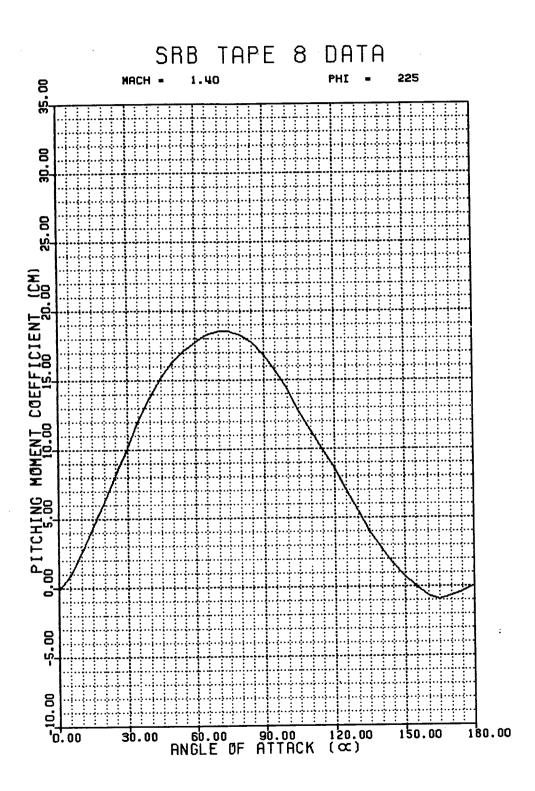


B-247
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

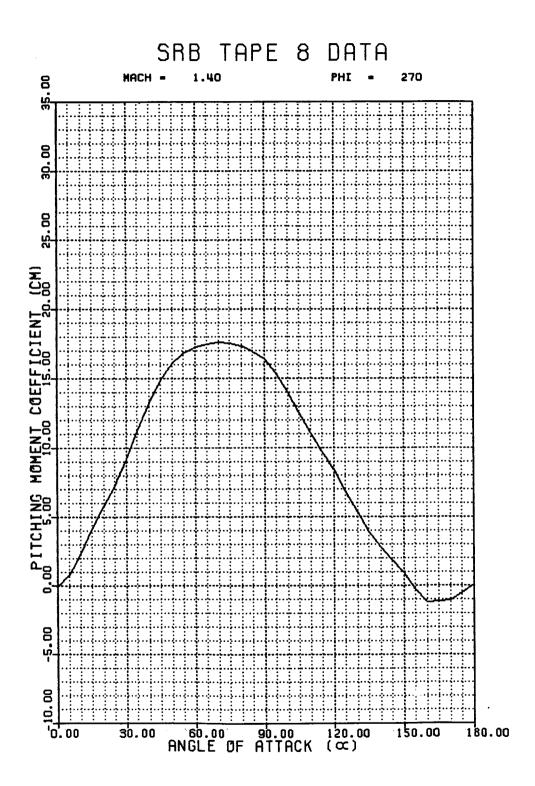


B-248

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

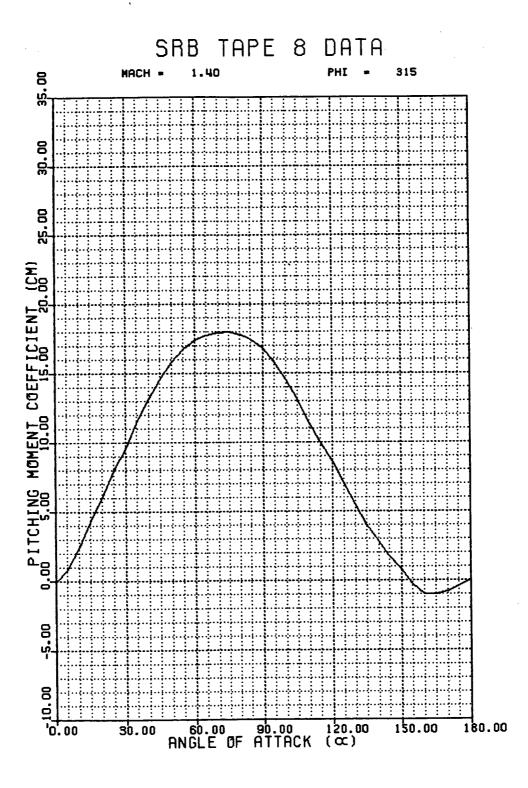


B-249



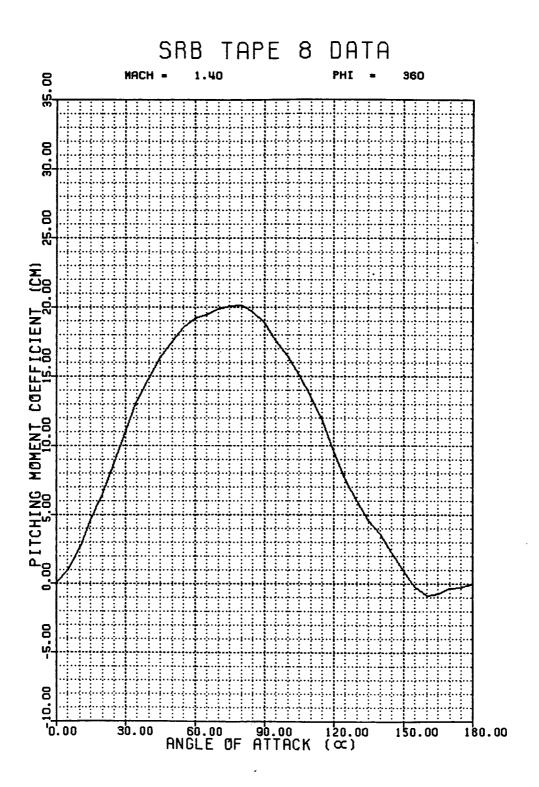
B-250

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

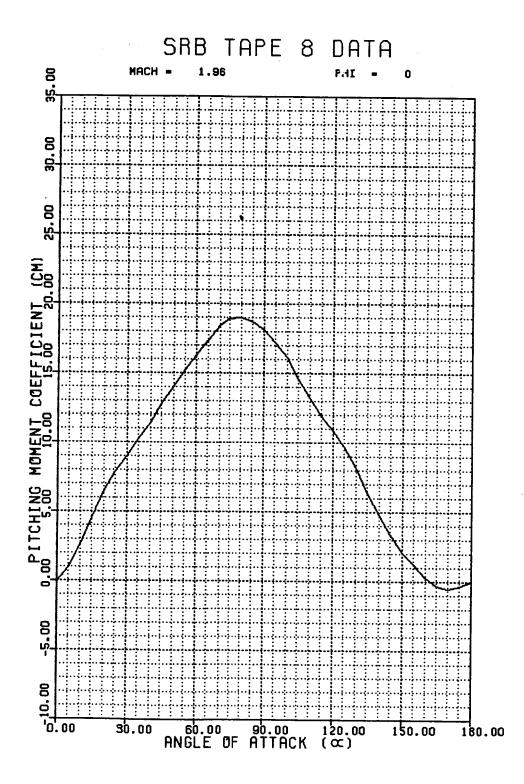


B-251

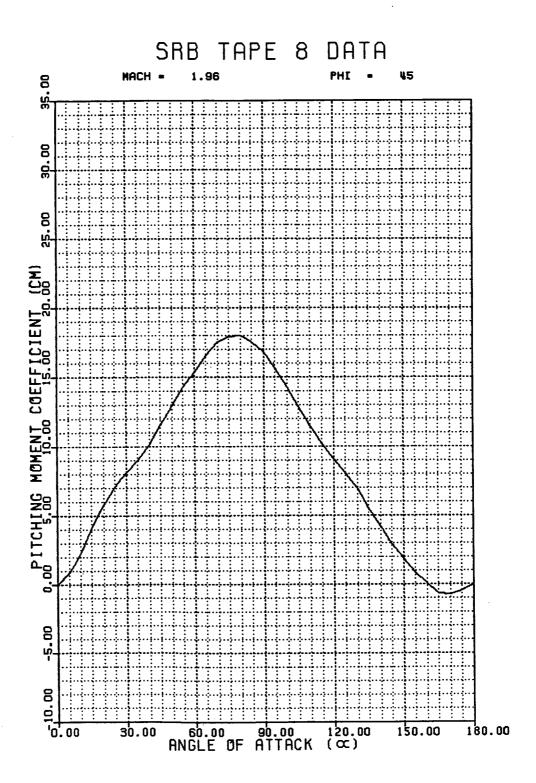
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



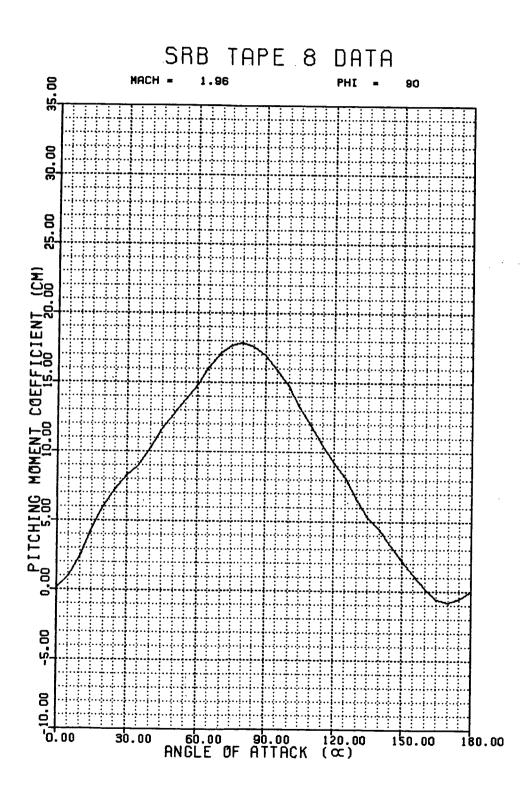
B-252
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



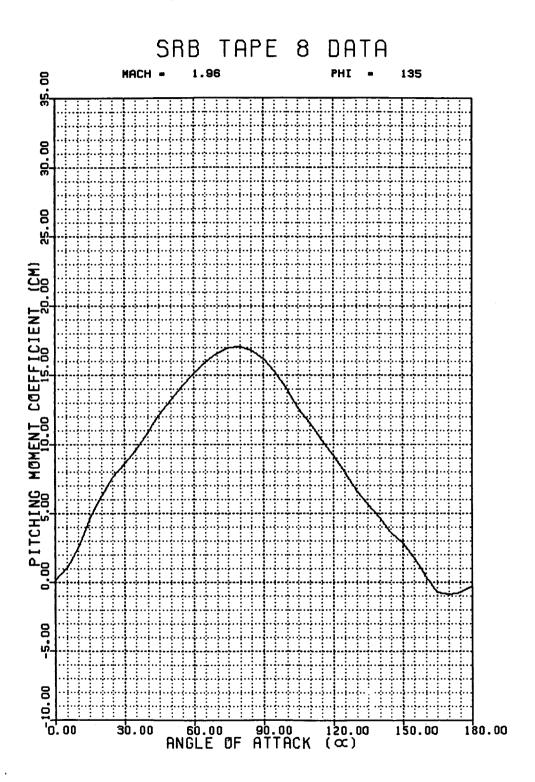
B-253



B-254
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

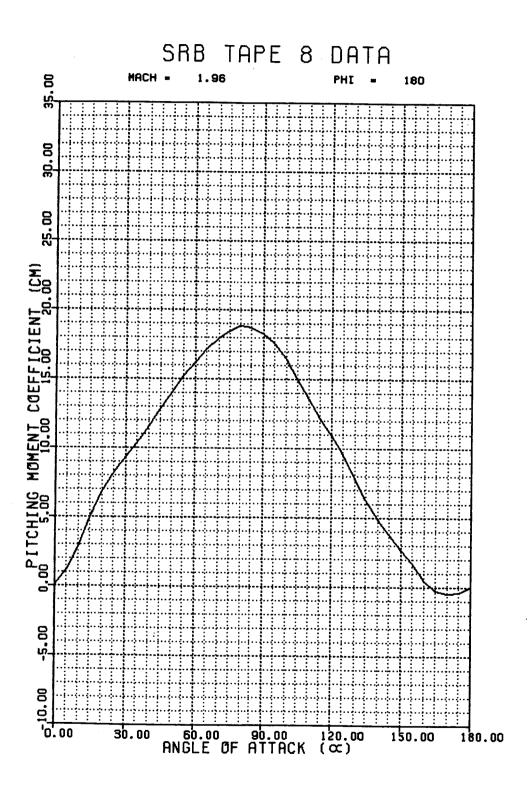


B-255

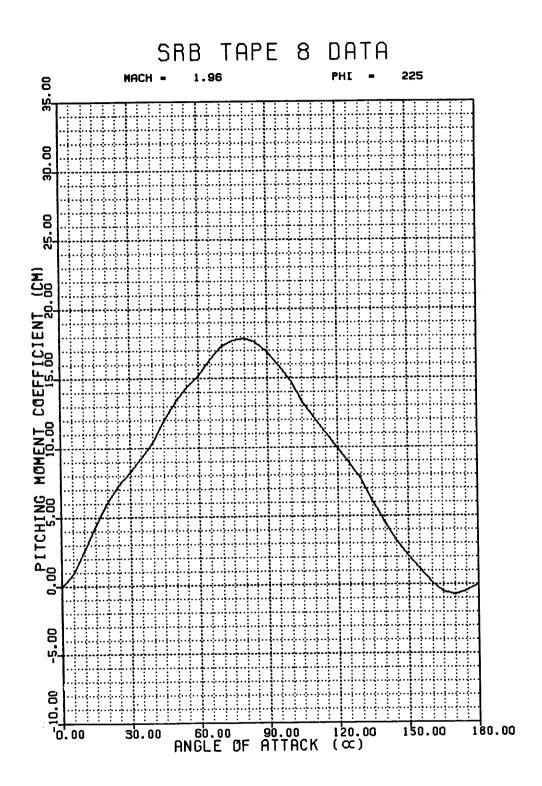


B-256

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

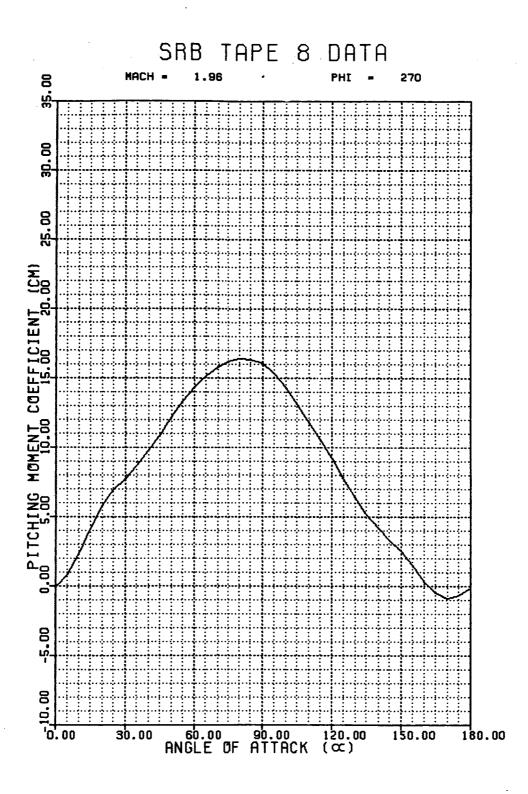


B-257

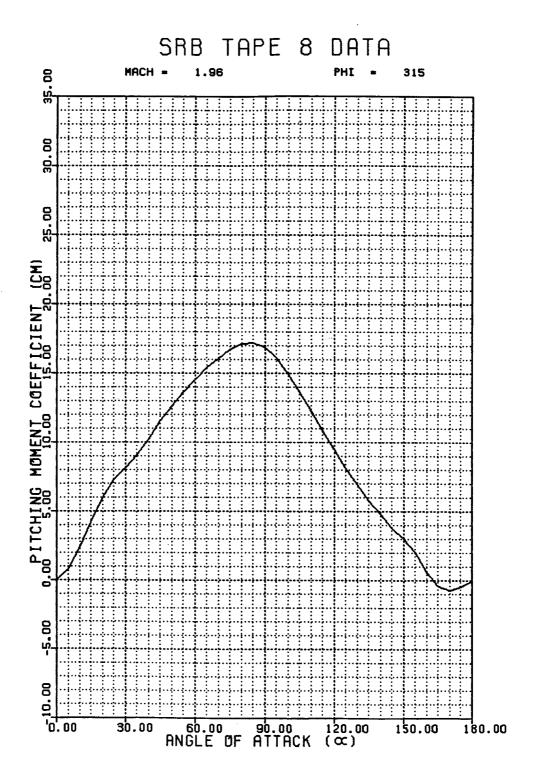


B-258

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

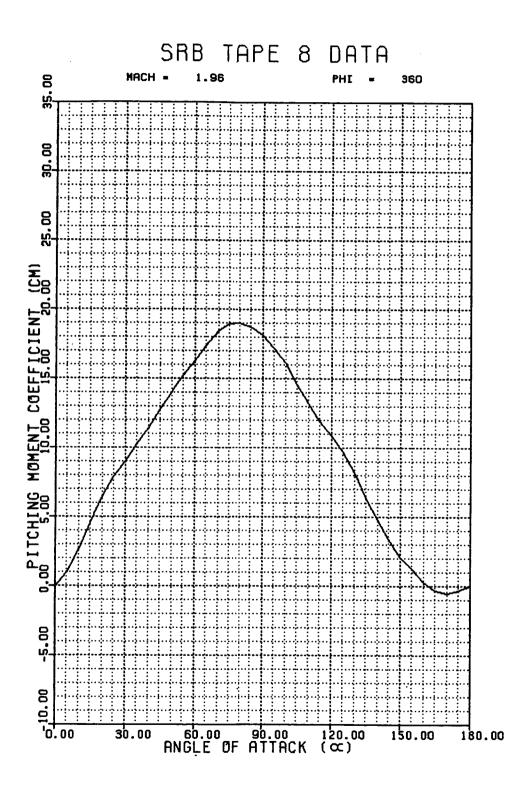


B-259
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

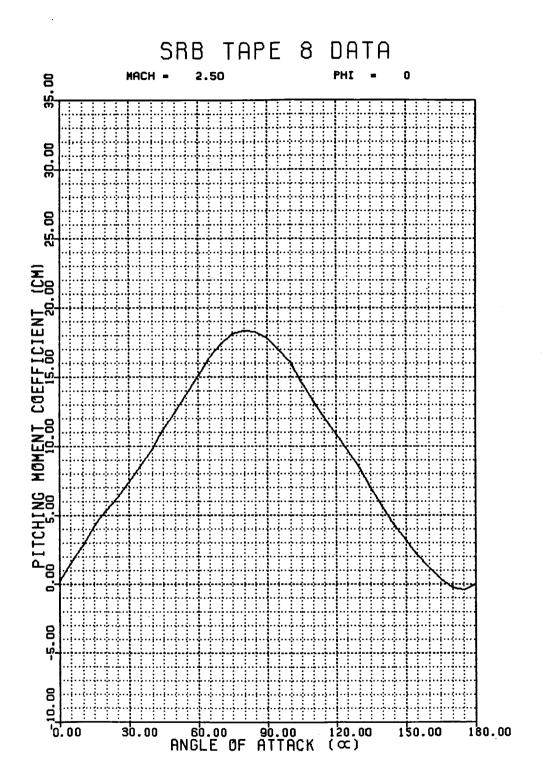


B-260

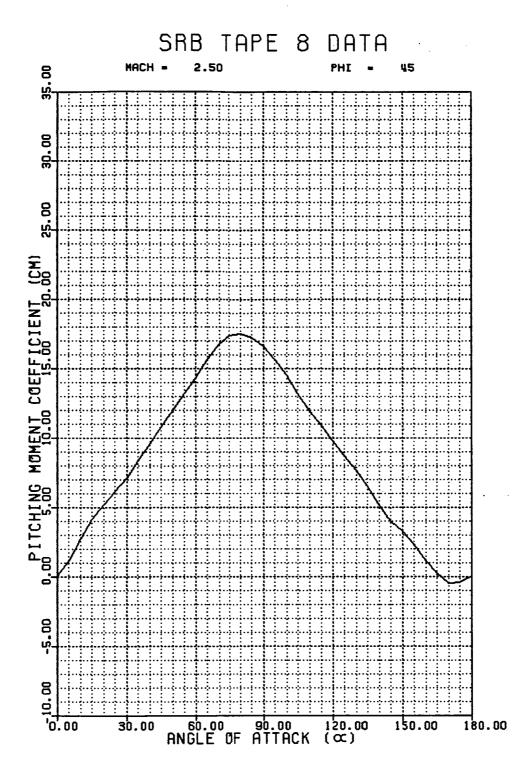
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-261
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

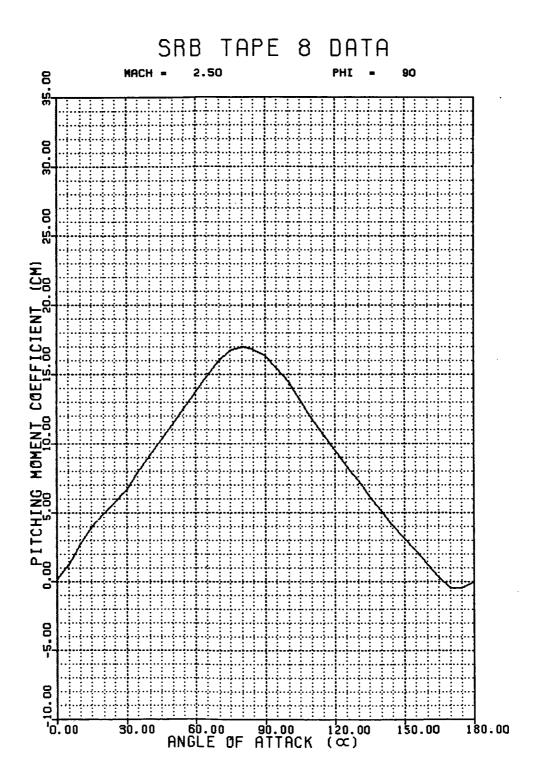


B-282
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

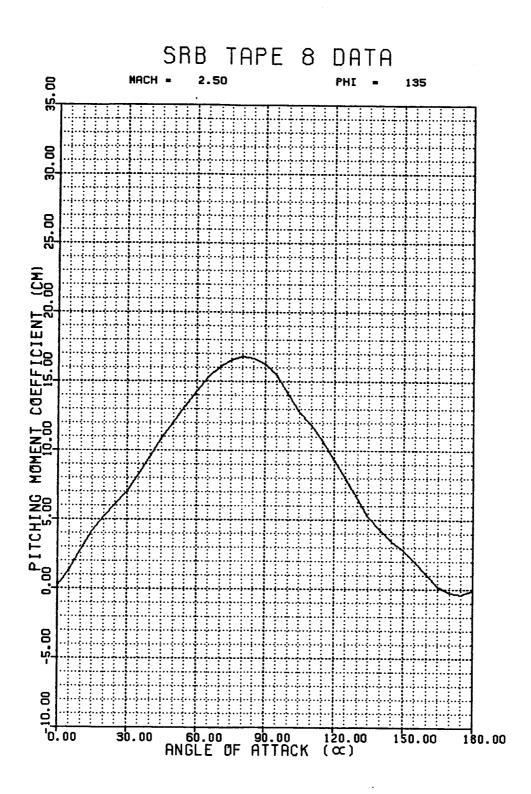


B-263

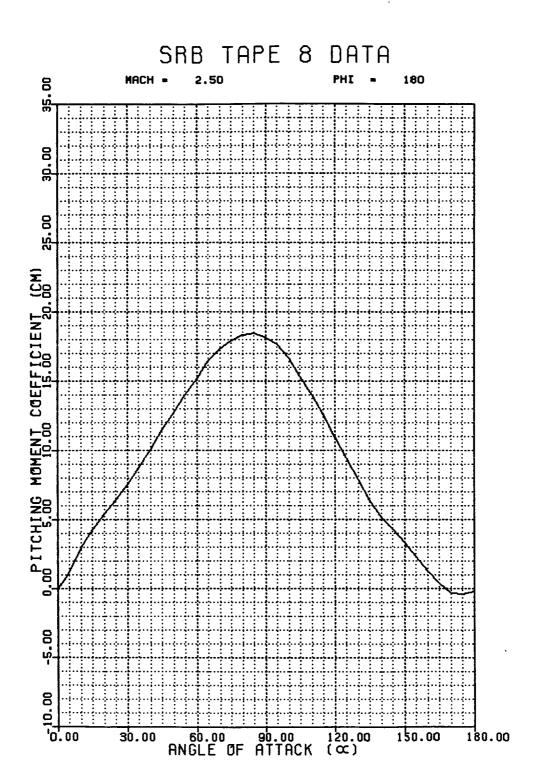
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



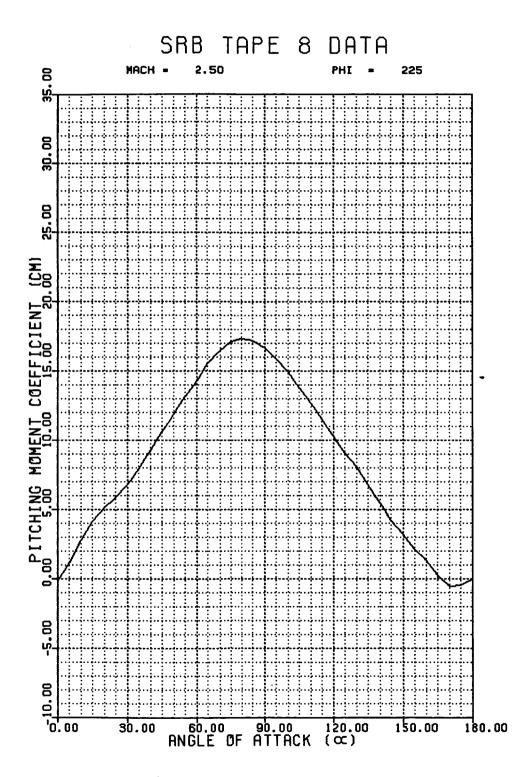
8-284
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



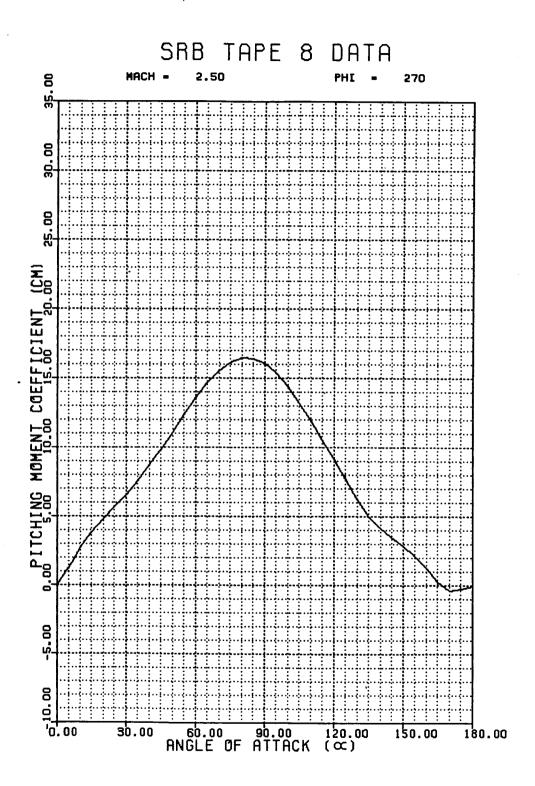
B-265
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



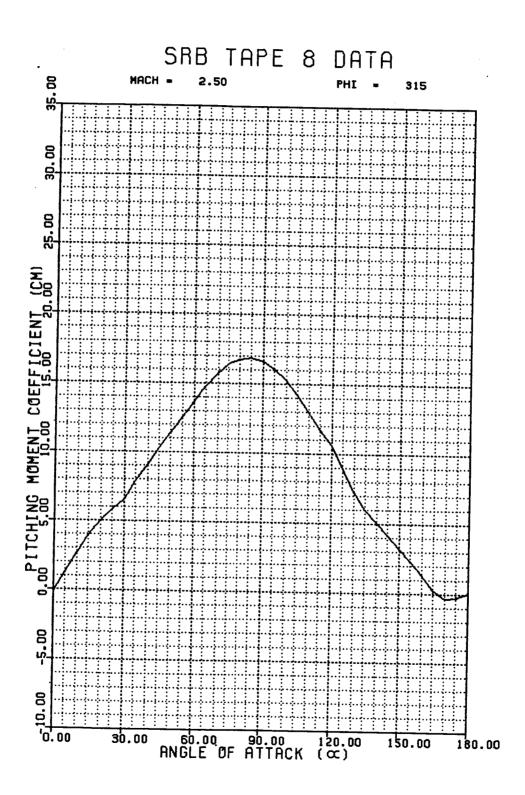
B-286



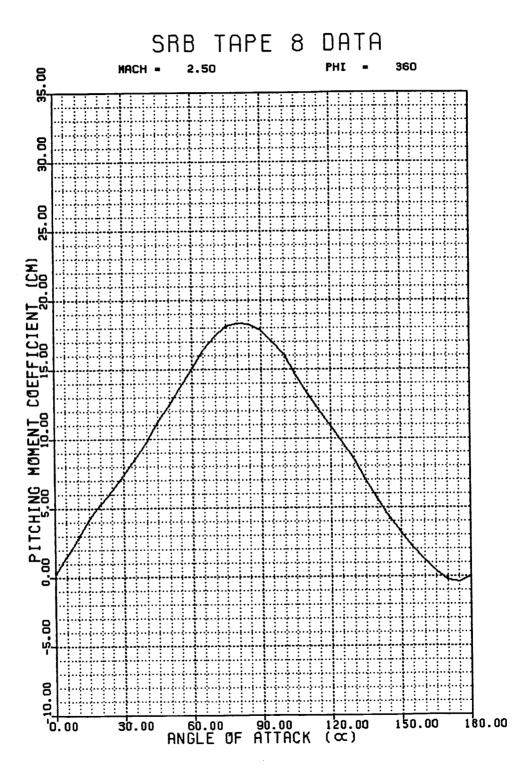
B-267



B-268
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

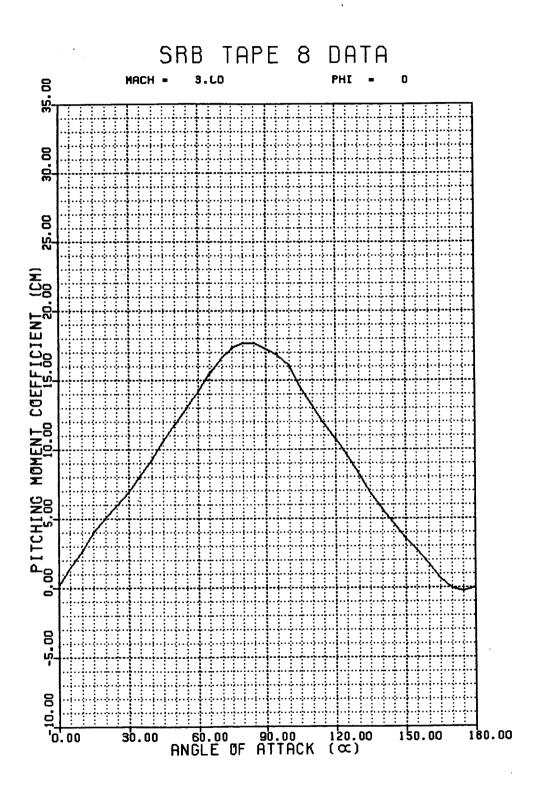


B-289

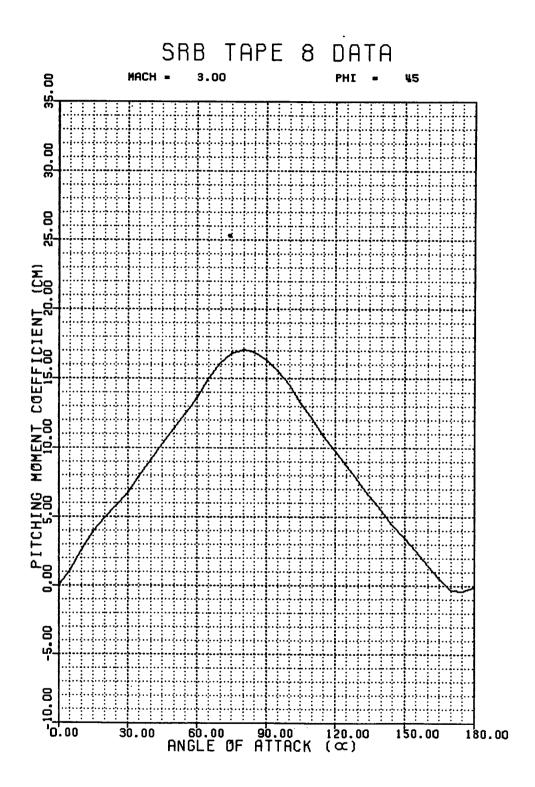


B-270

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

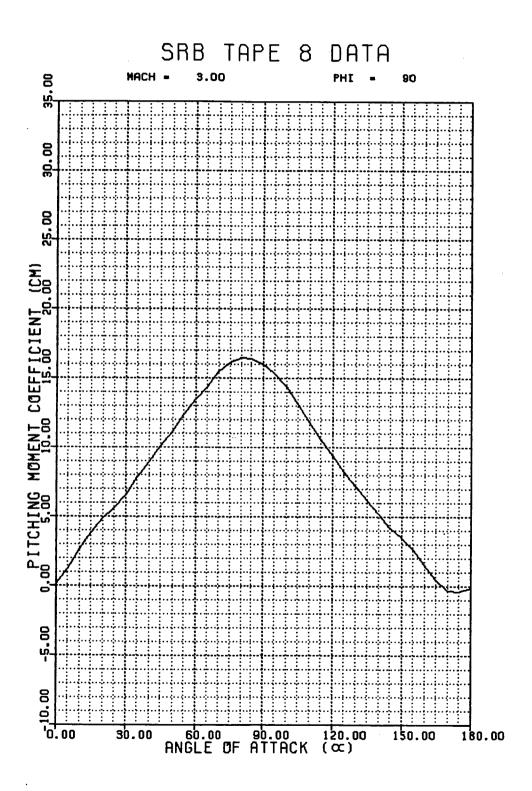


B-271
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

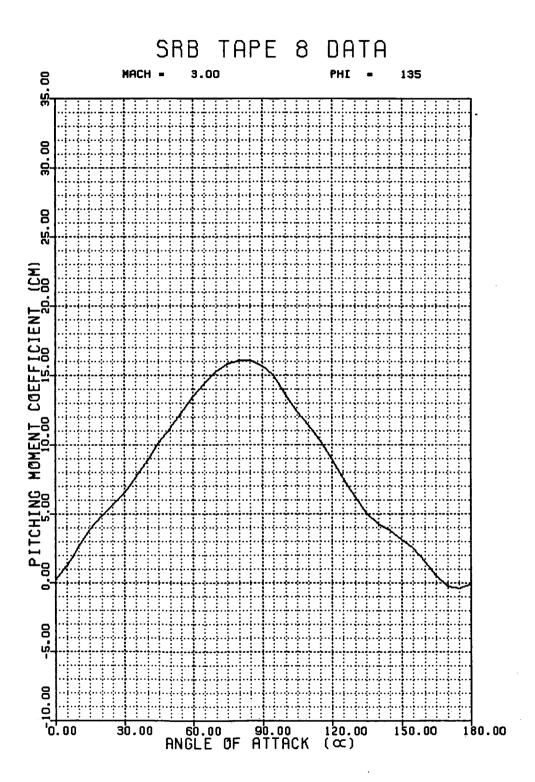


B-272

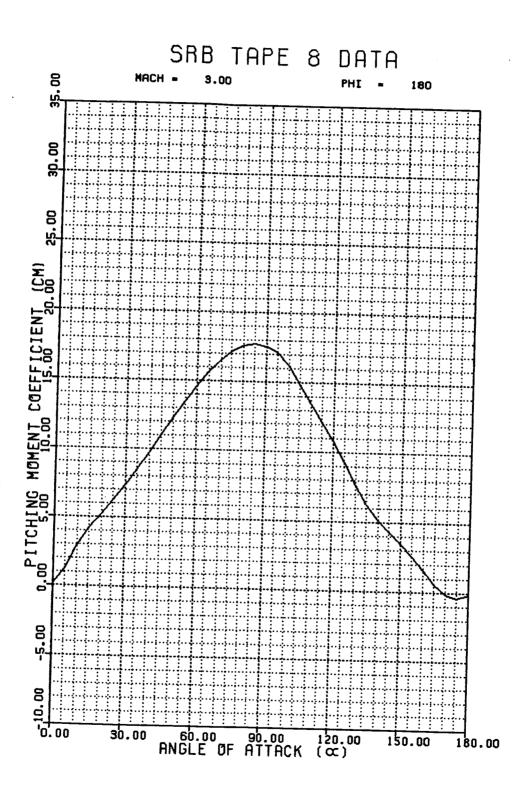
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



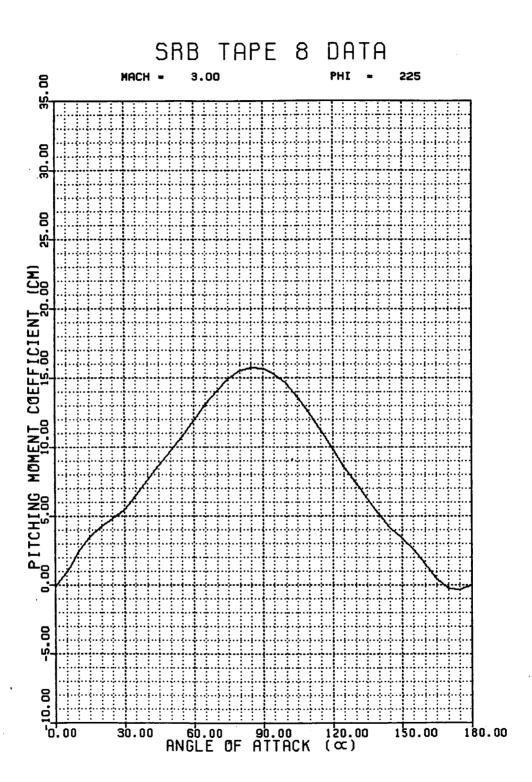
B-273



B-274
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

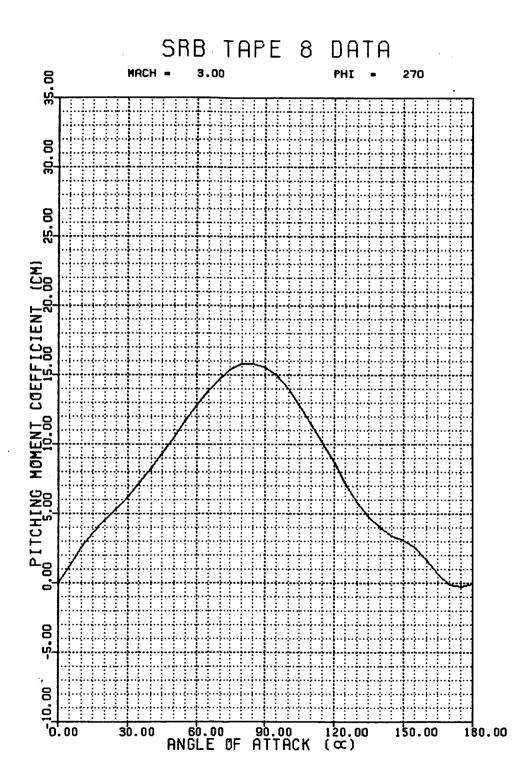


B-275 . LOCKHEED-HUNTSVILLE ENGINEERING CENTER

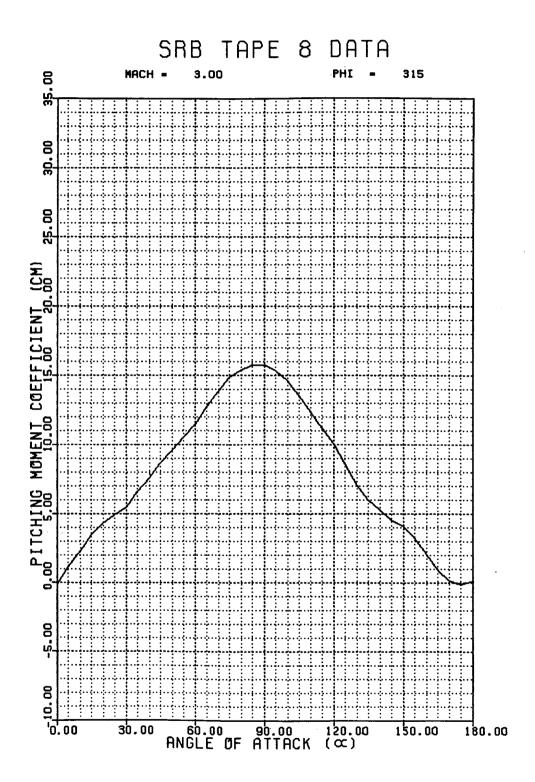


B-276

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

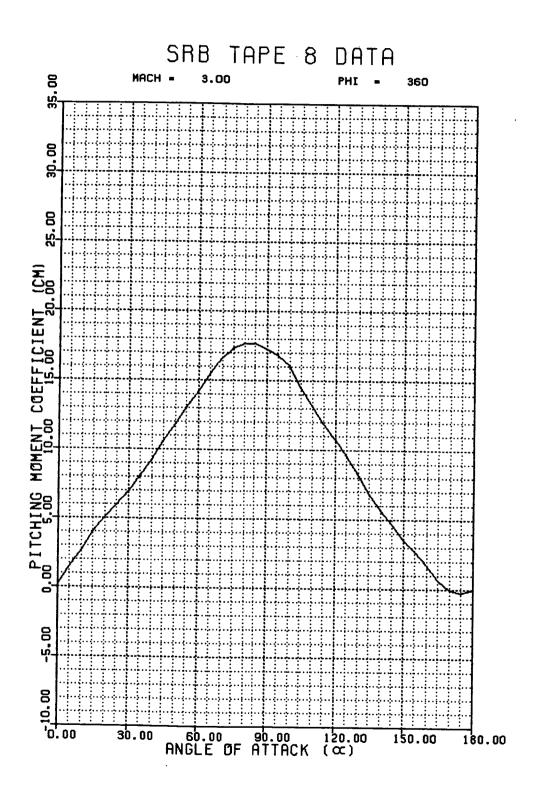


B-277

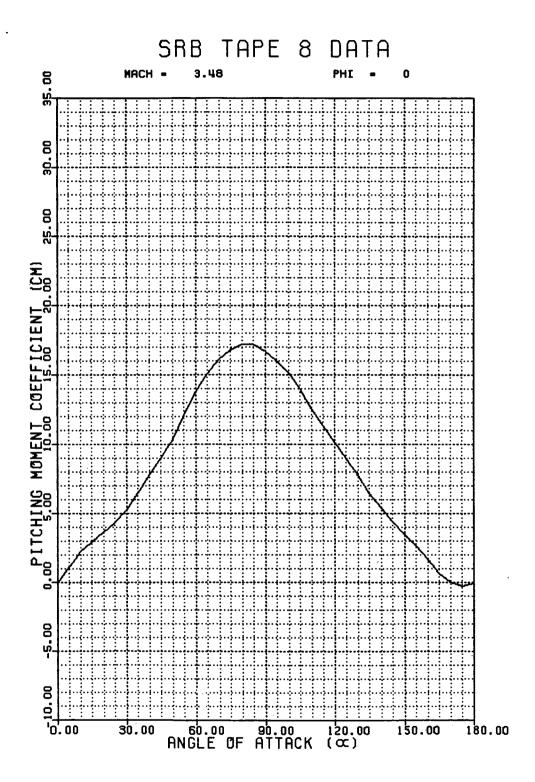


B-278

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

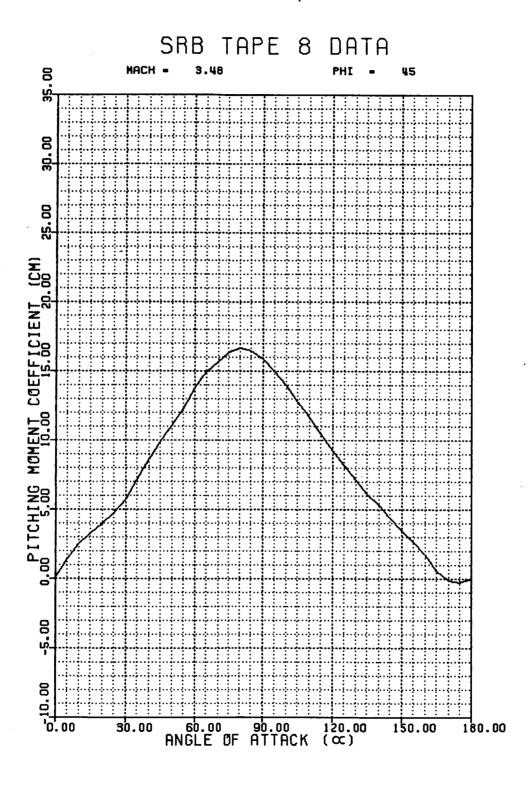


B-279



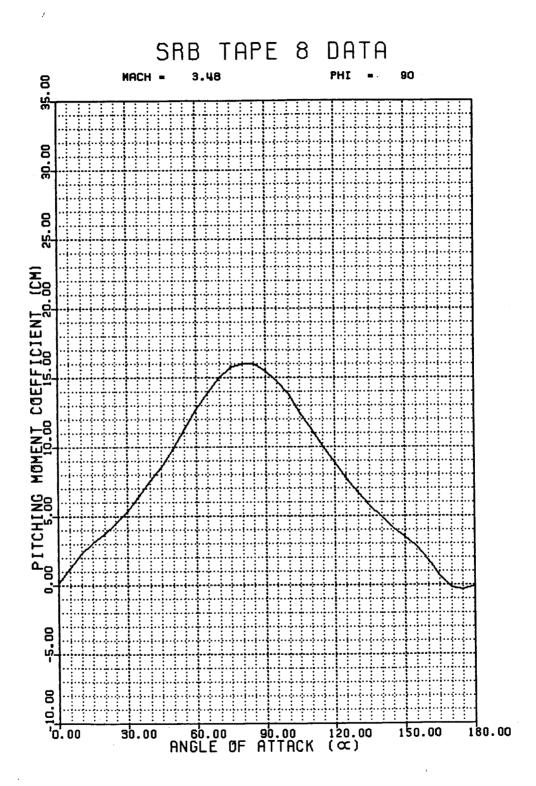
B-280

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

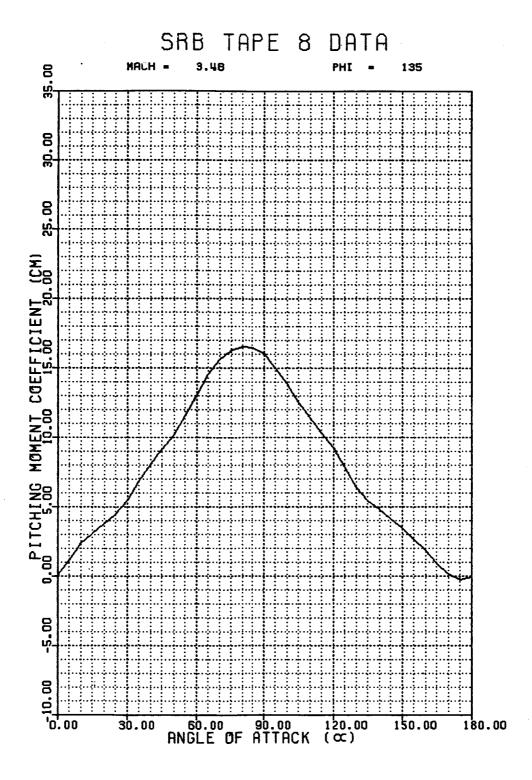


· B-281

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

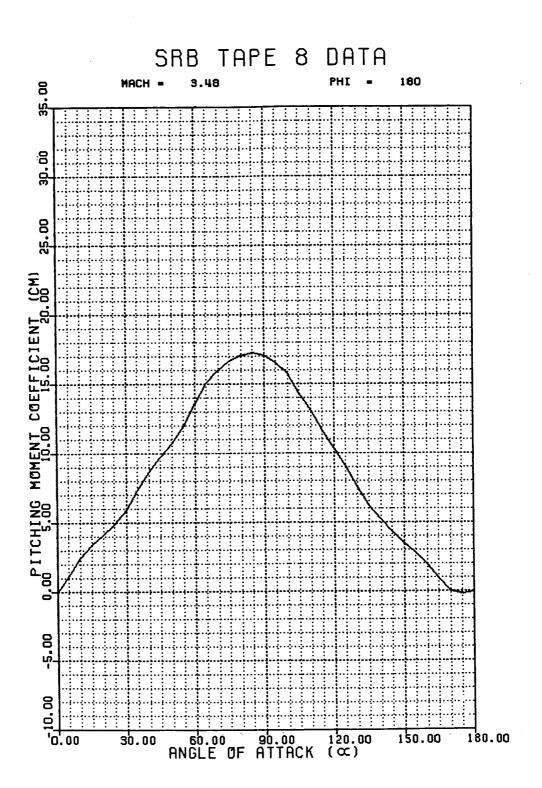


B-282
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

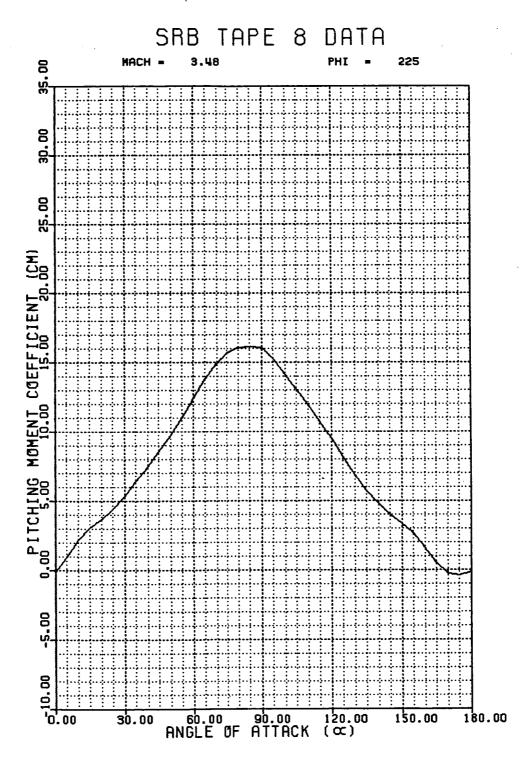


B-283

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

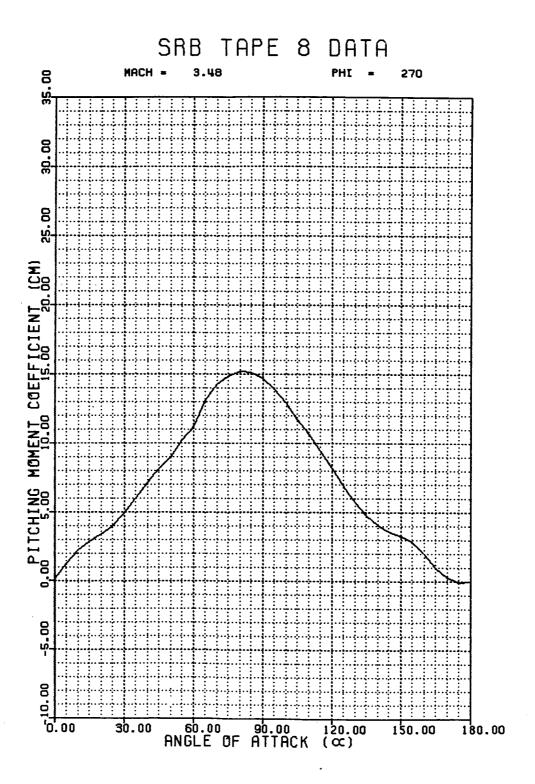


B-284
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

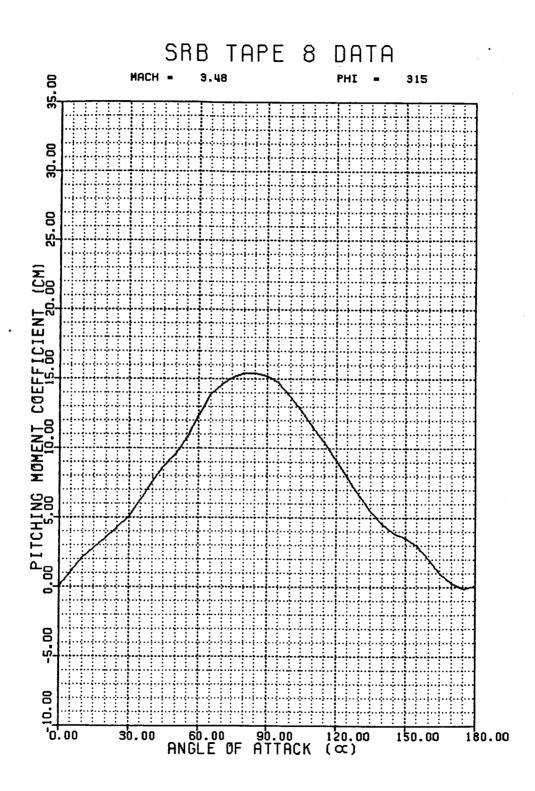


B-285

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

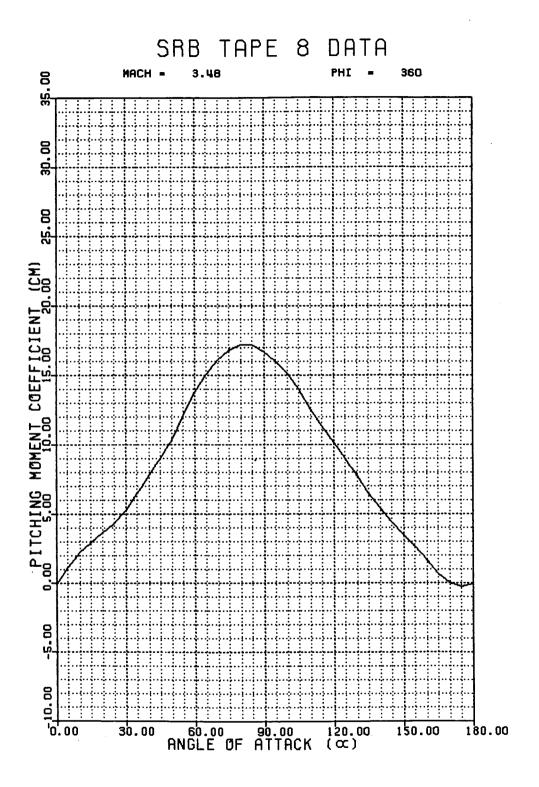


B-286
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-287

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

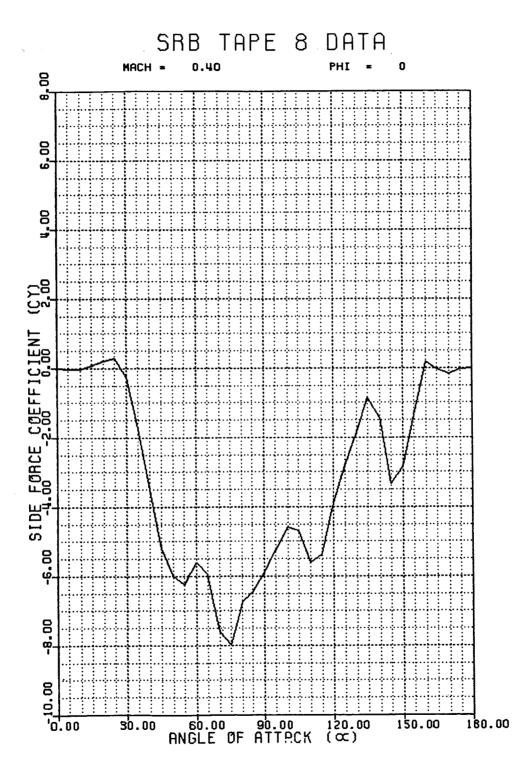


B-288

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

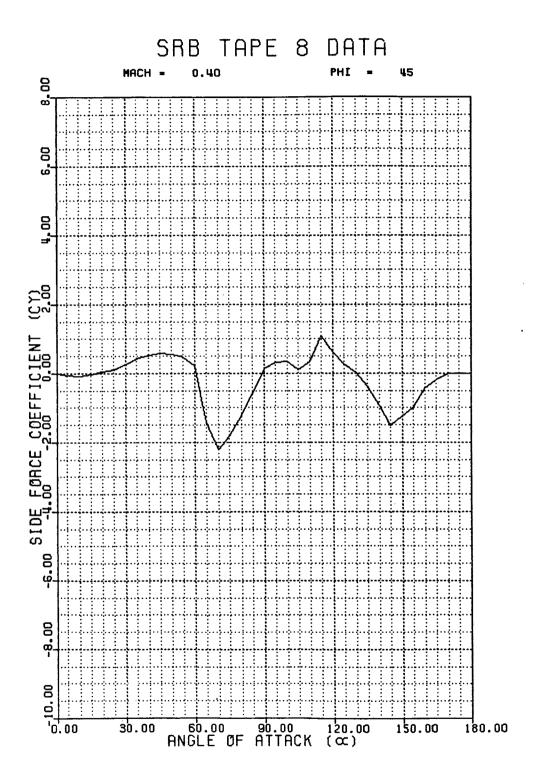
SIDE FORCE (CY)

Mach Number	Page
0.4	в-289
0.5	B-298
0.55	B-307
0.6	B-316
0.7	B-325
0.8	B-334
0.9	B-343
0.95	B-352
1.05	B-361.
1.1	B-370
1.2	B-379
1.4	в-388
1.96	В-397
2.5	B-406
3.0	B-415
3.48	B-424



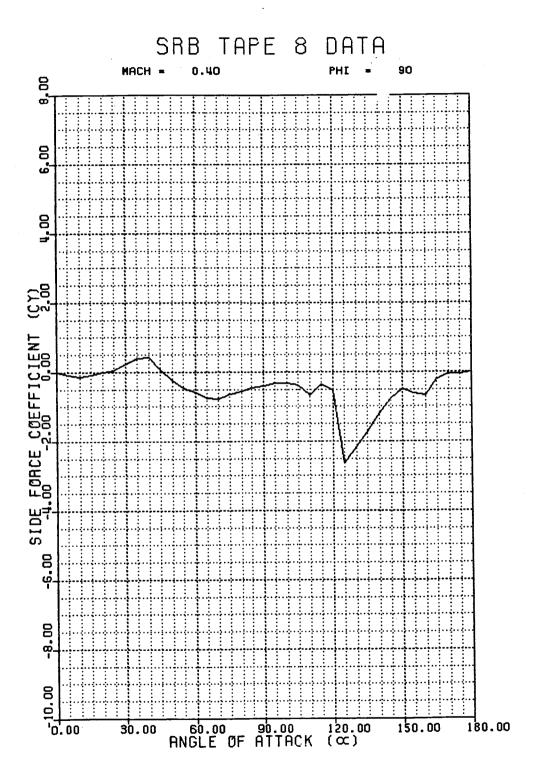
B-289

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

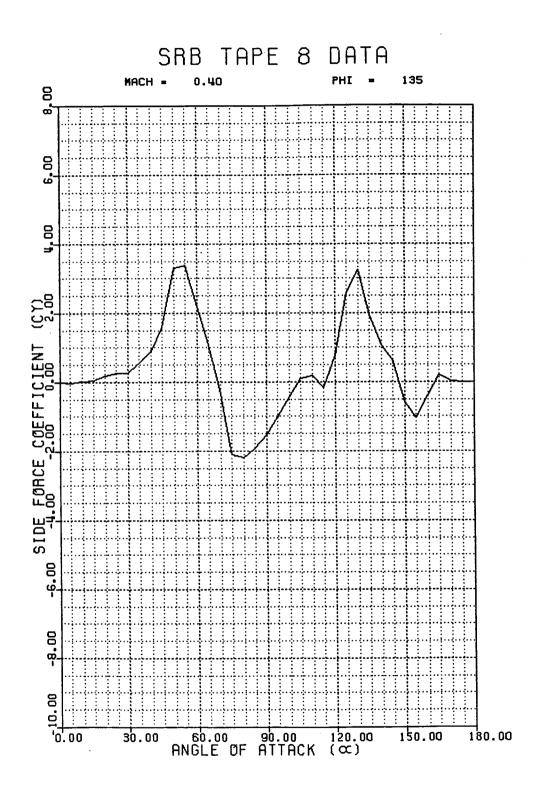


B-290

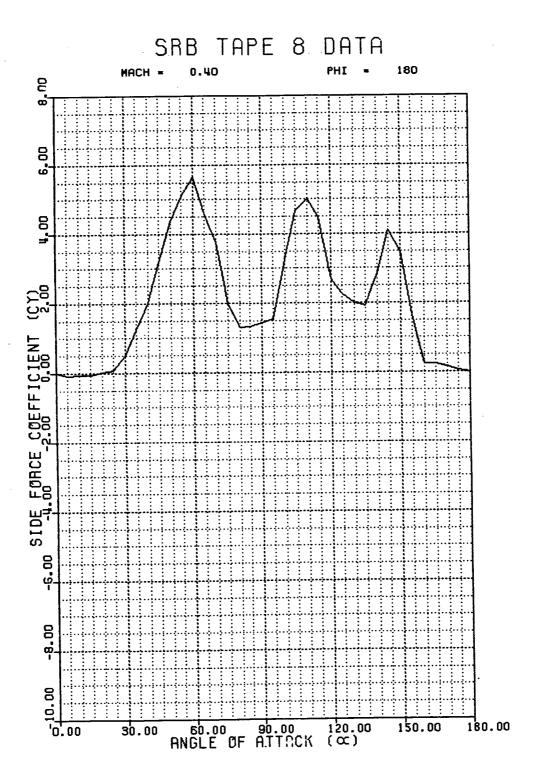
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-291

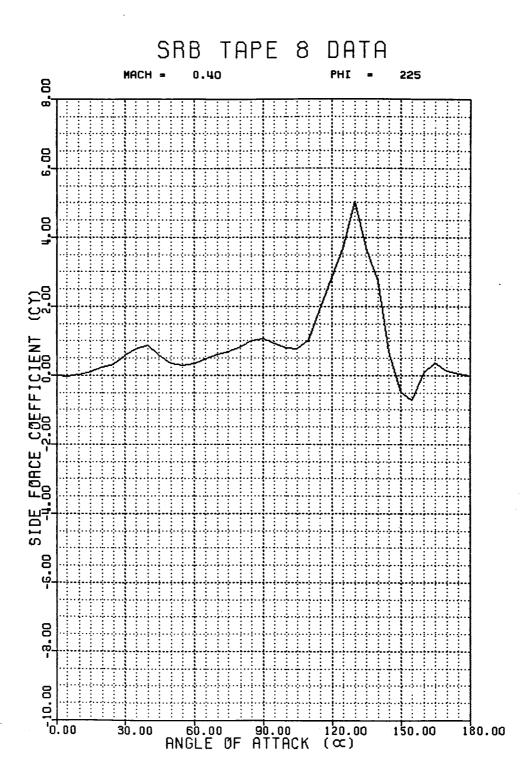


B-292
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

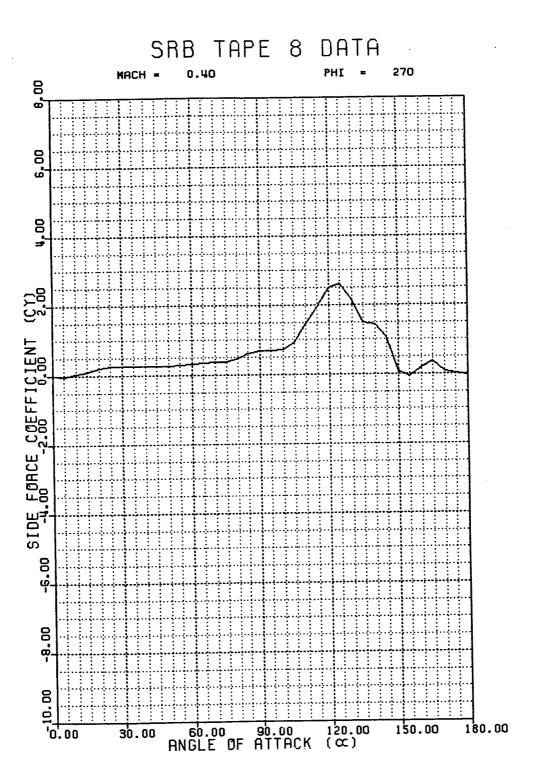


B-293

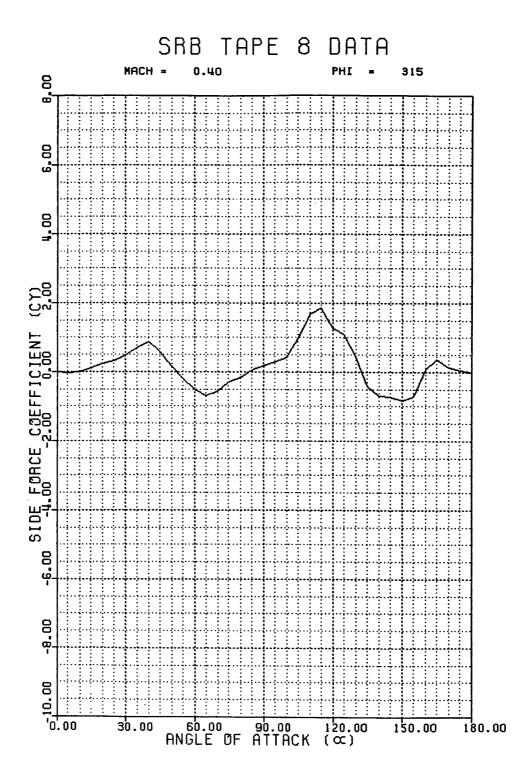
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



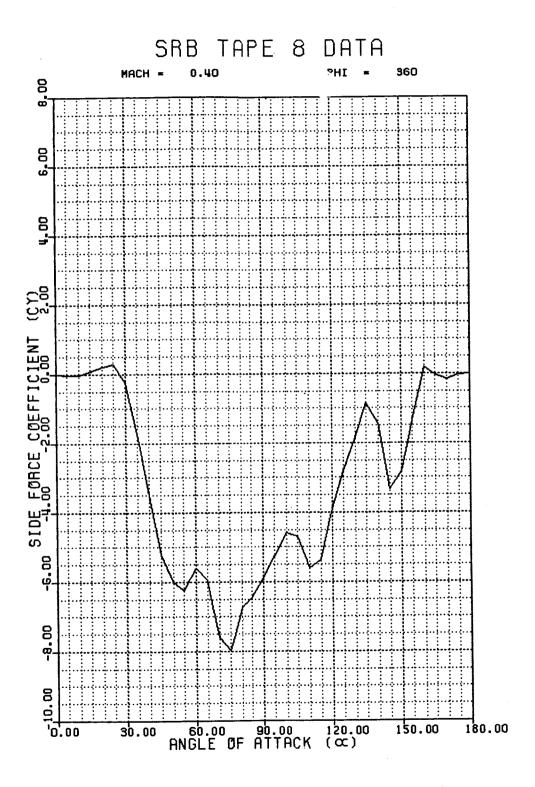
B-294



B-295
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

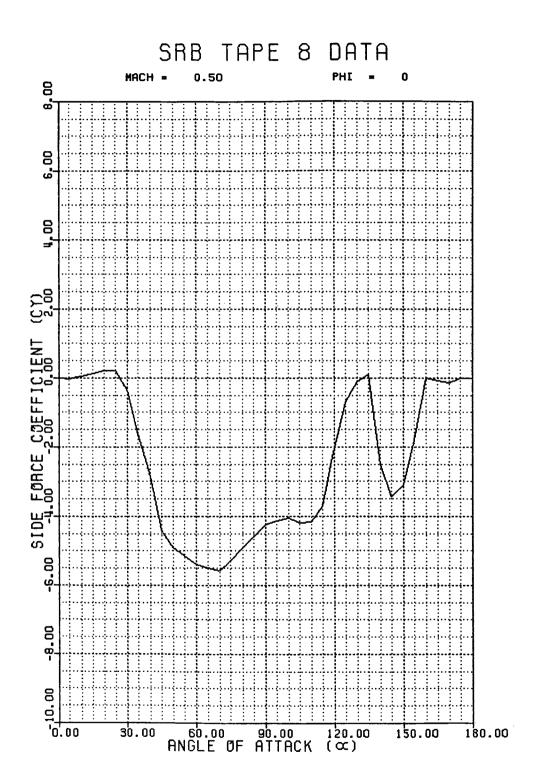


B-296



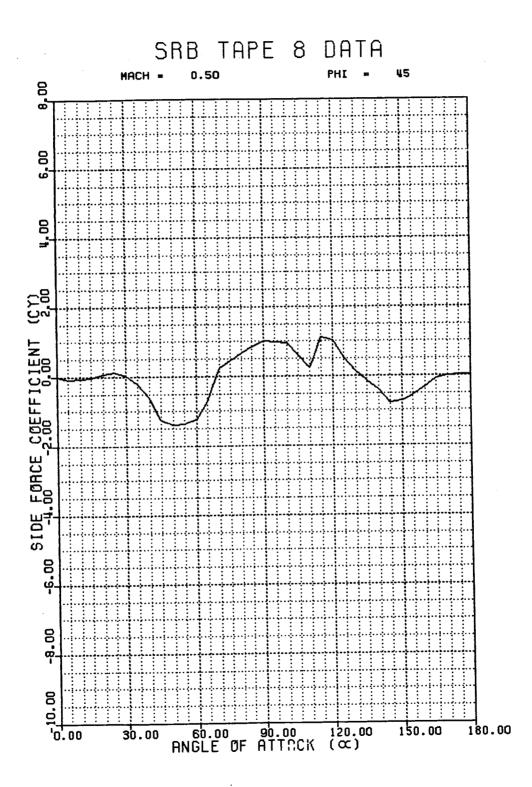
B-297

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

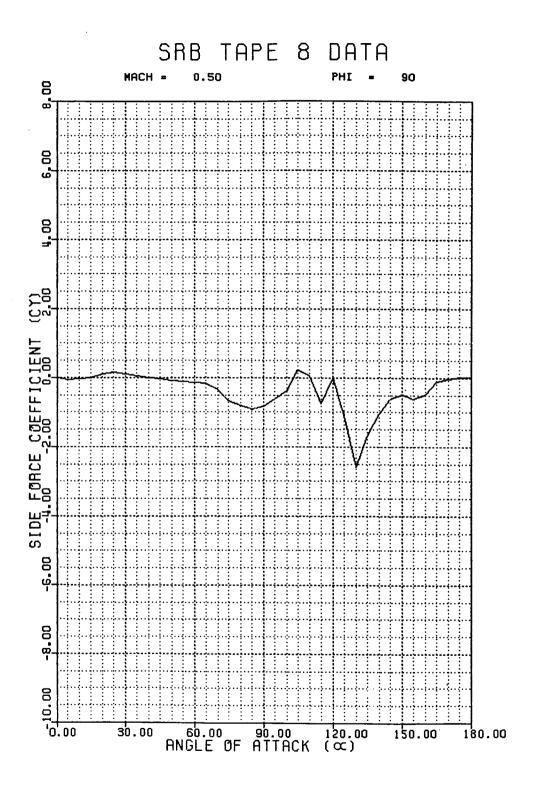


B-298

LÖCKHEED-HUNTSVILLE ENGINEERING CENTER

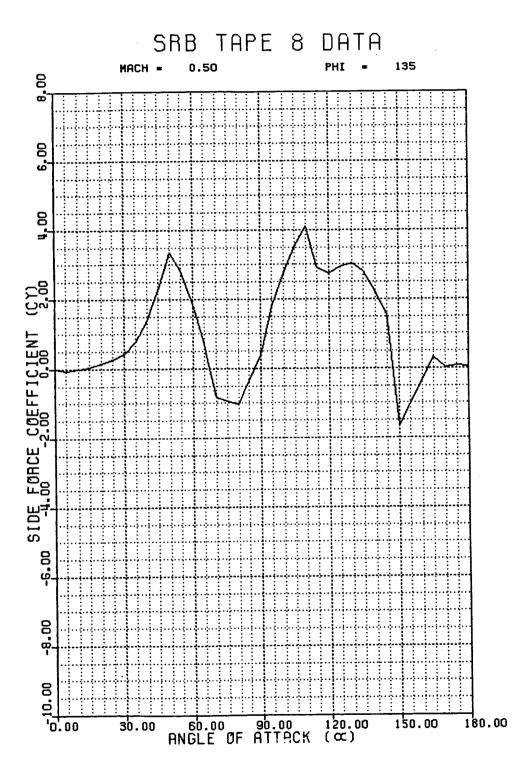


B-299
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

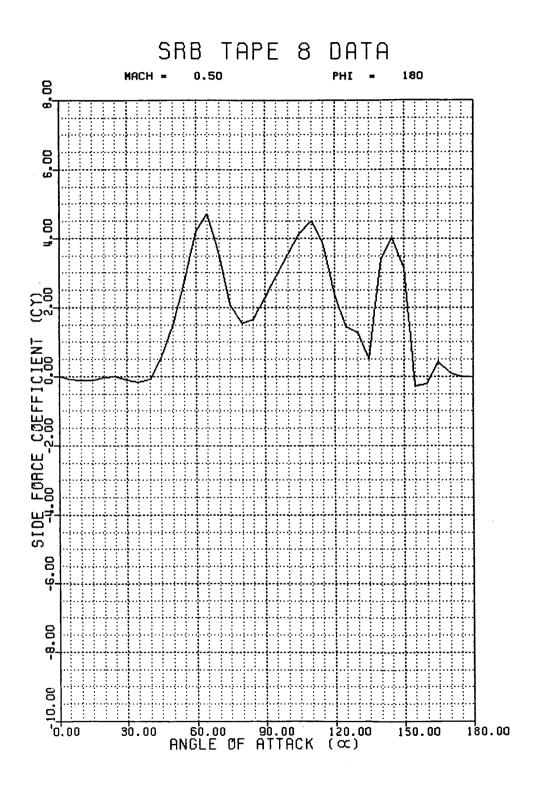


B-300

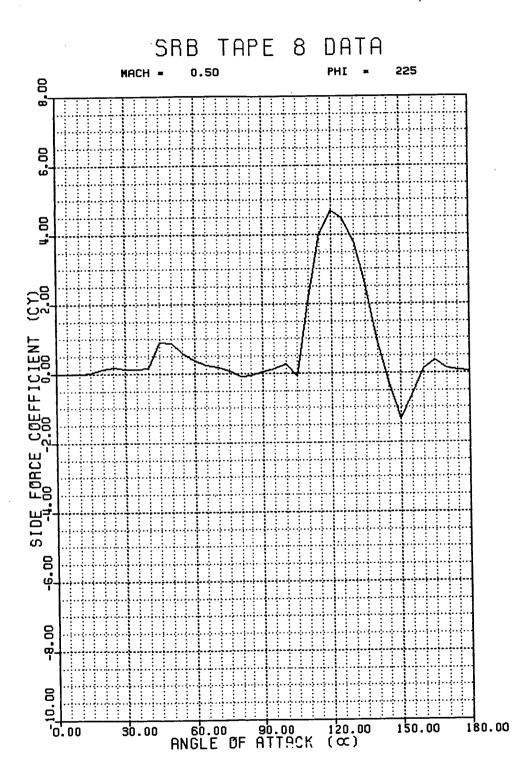
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



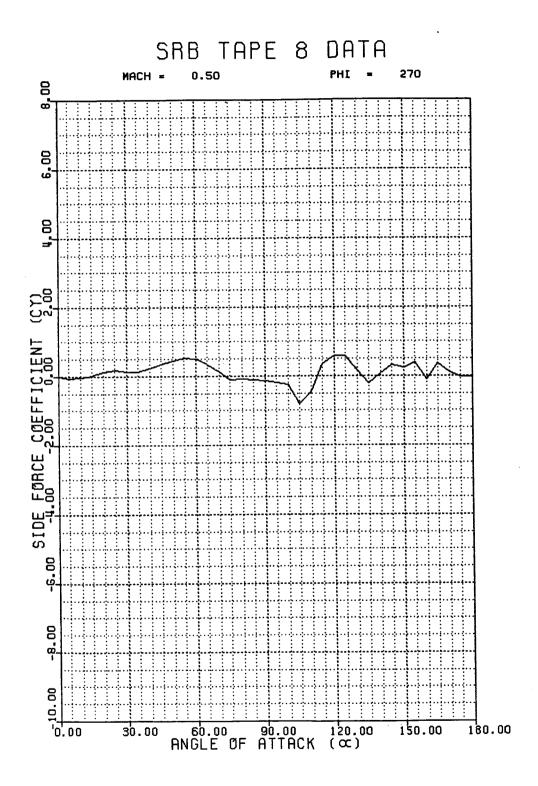
B-301
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-302
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

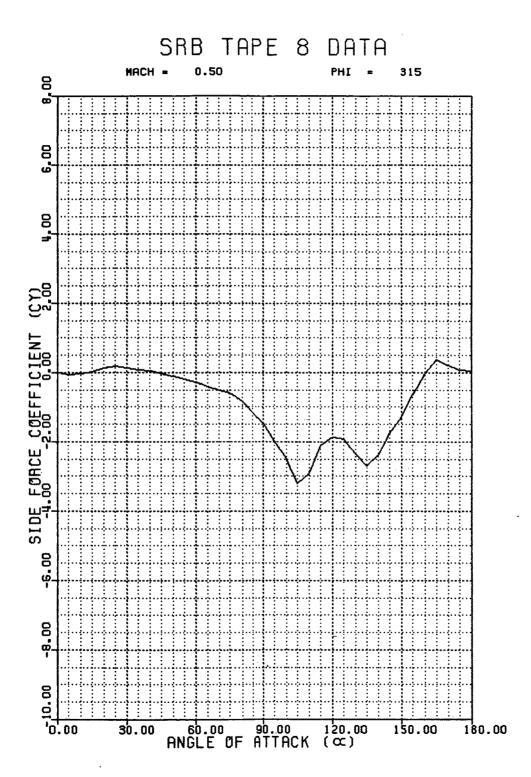


B-903

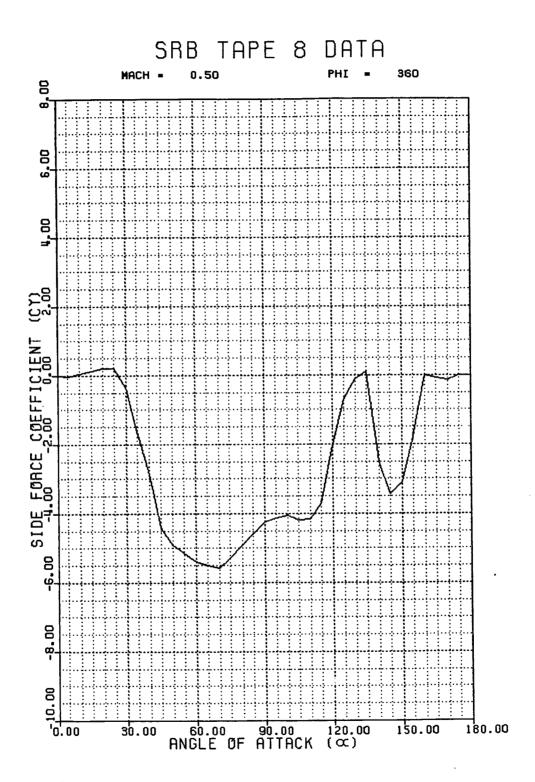


B-904

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

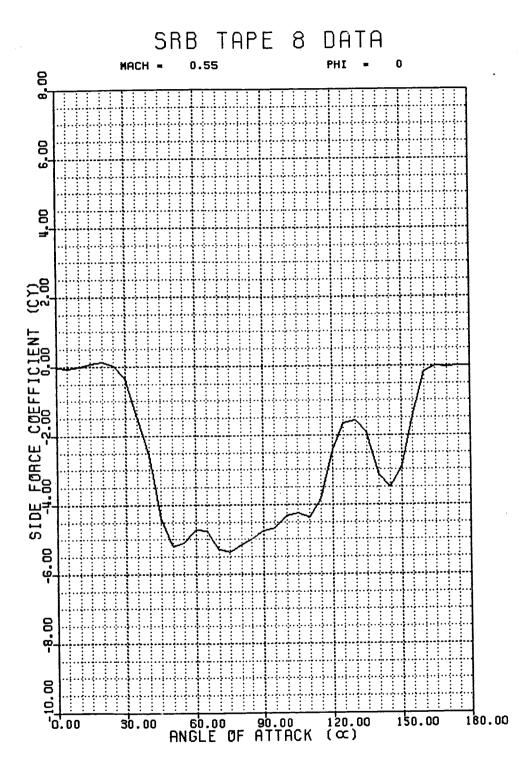


B-305

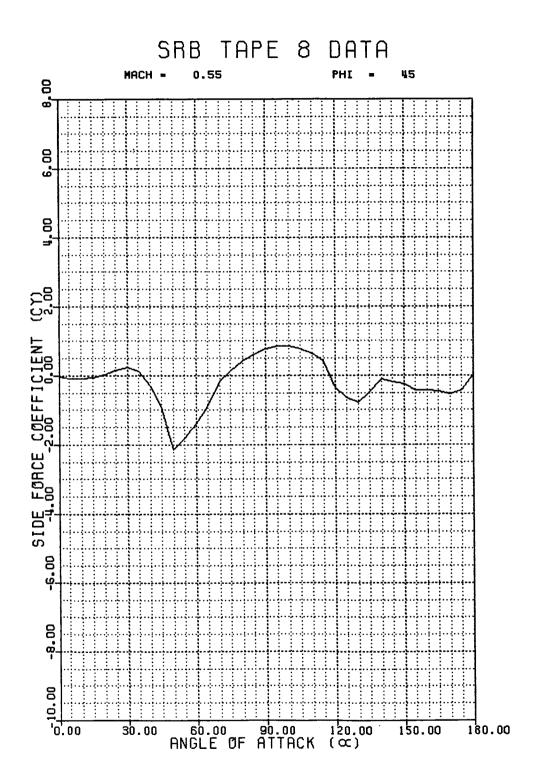


B-306

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



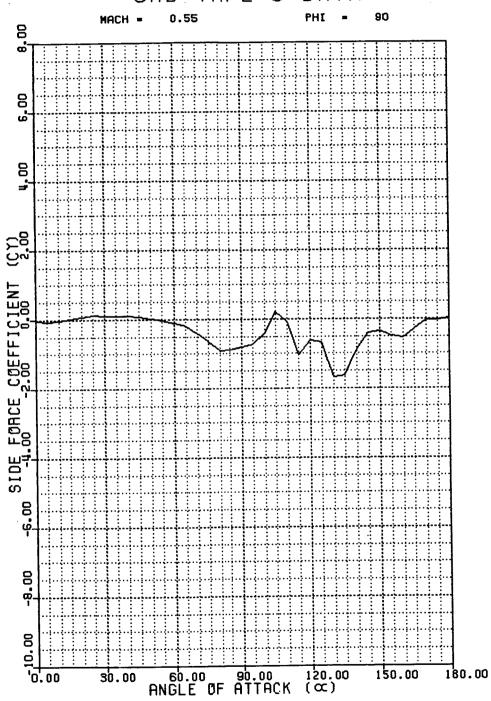
B-307
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



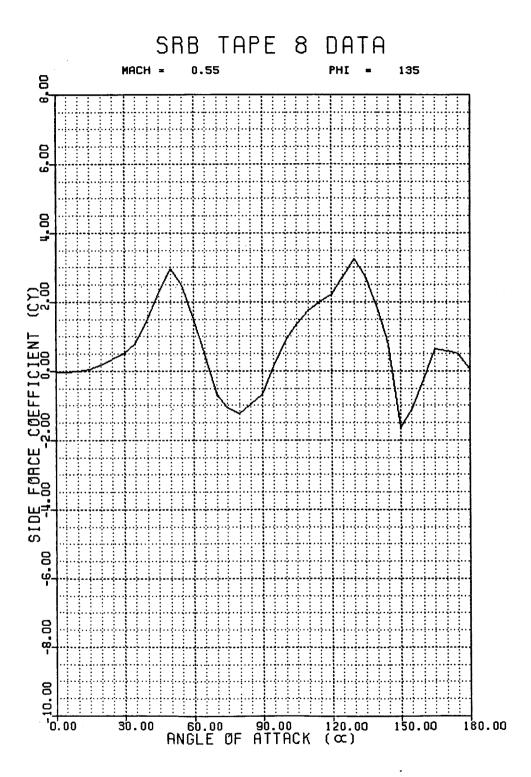
B-308

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA

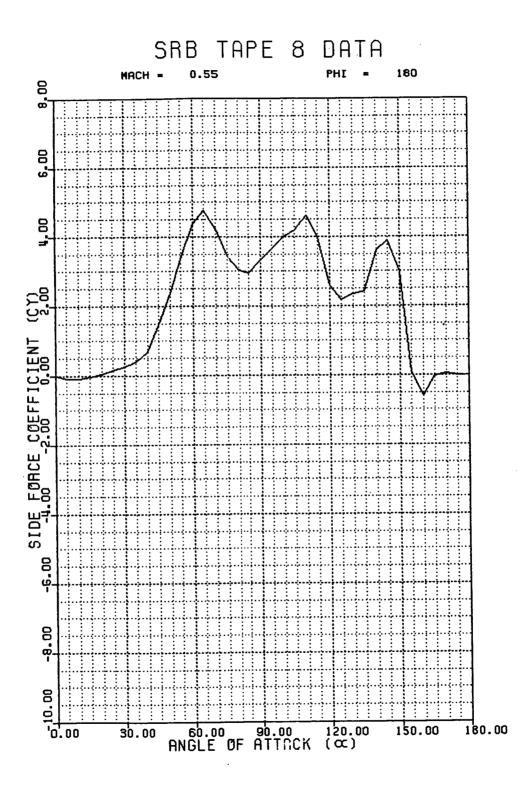


B-309

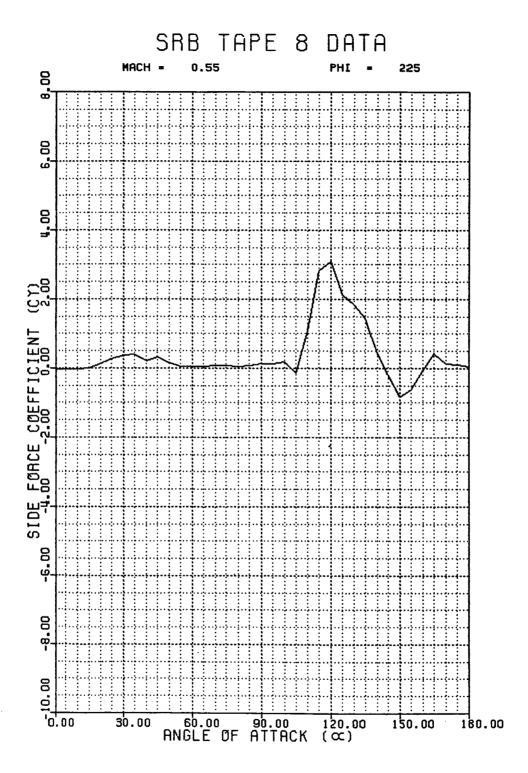


B-310

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

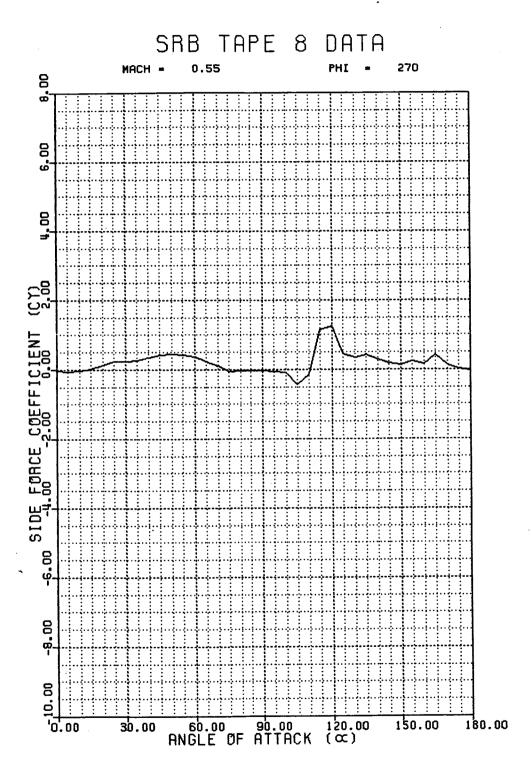


B-911
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

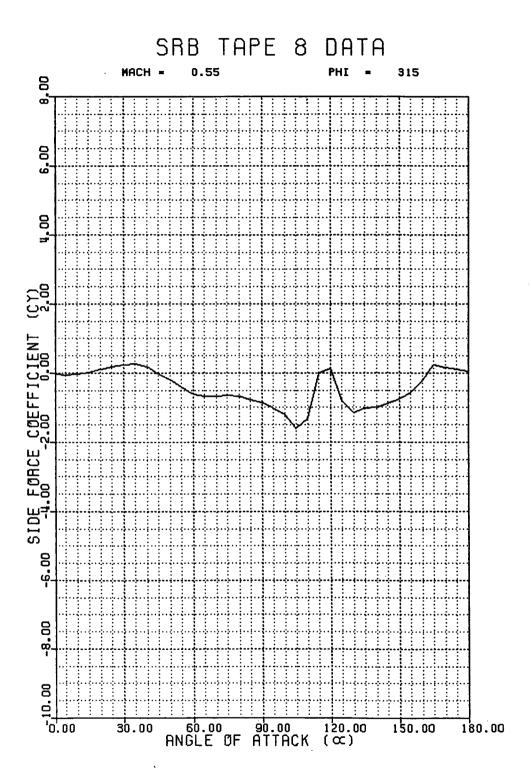


B-312

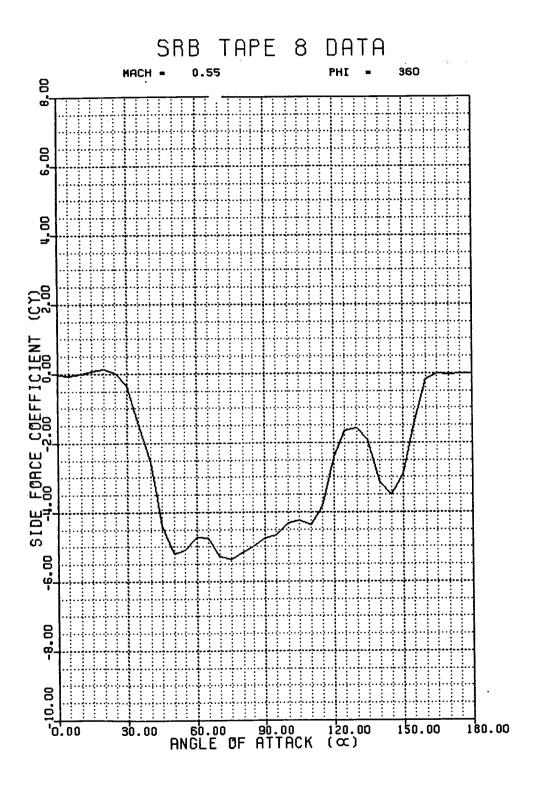
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-313

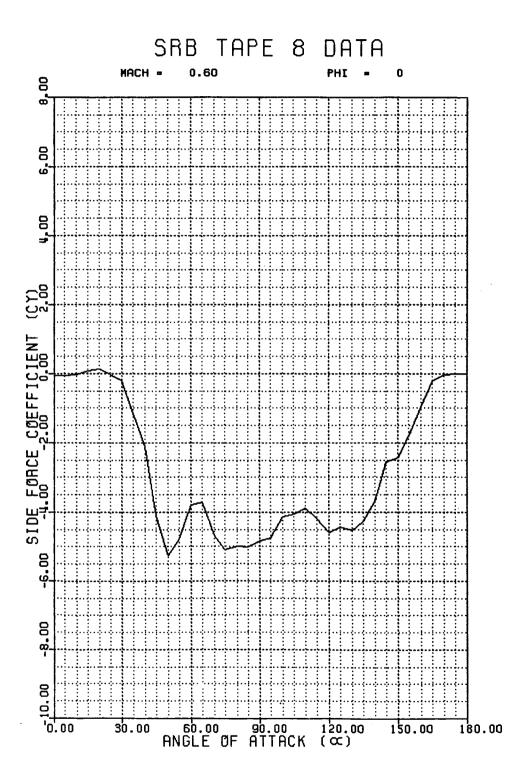


B-314
.
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



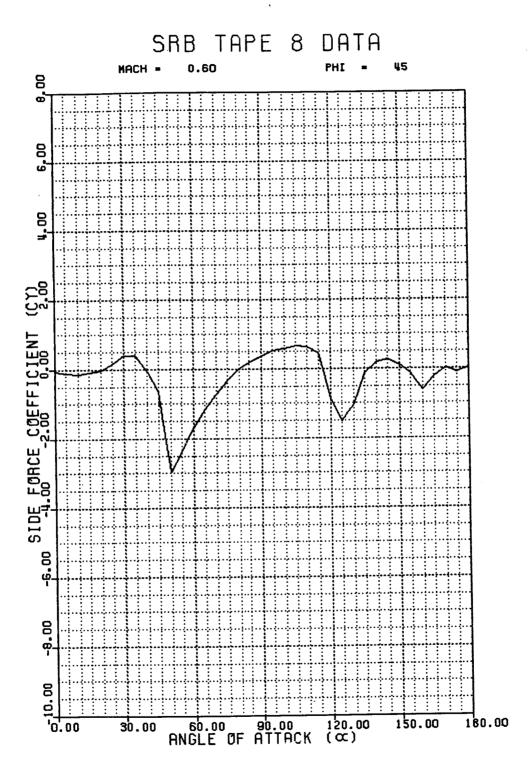
B-915

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



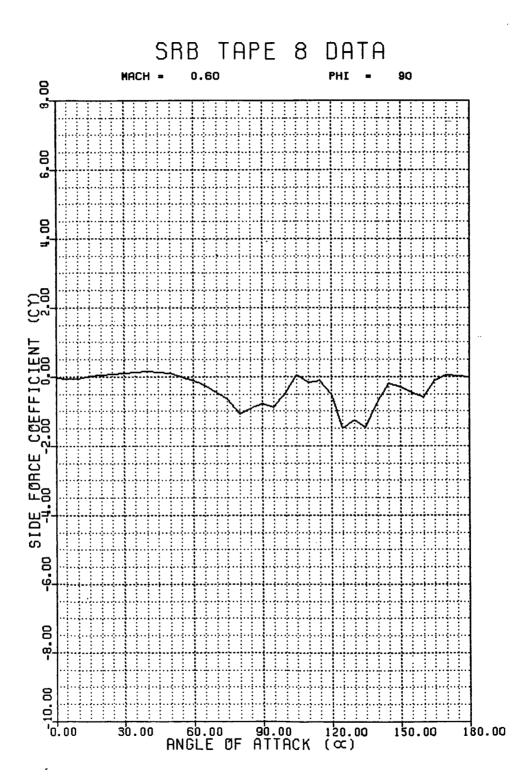
B-316

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



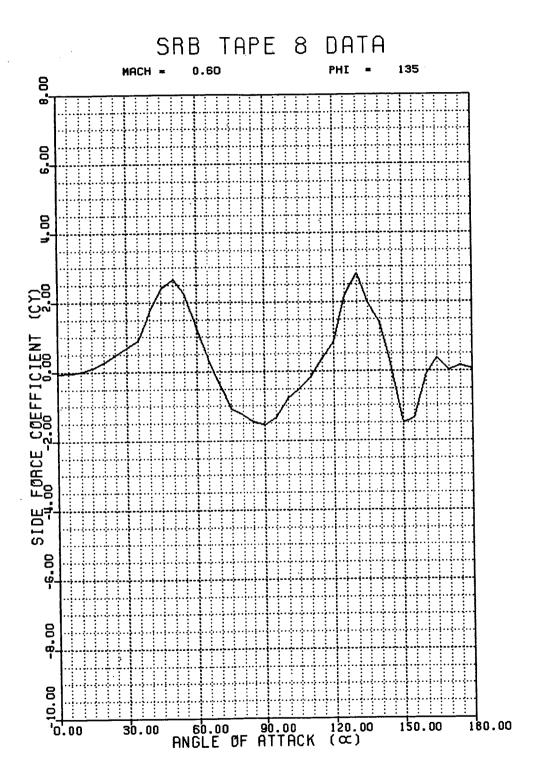
. B-917

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

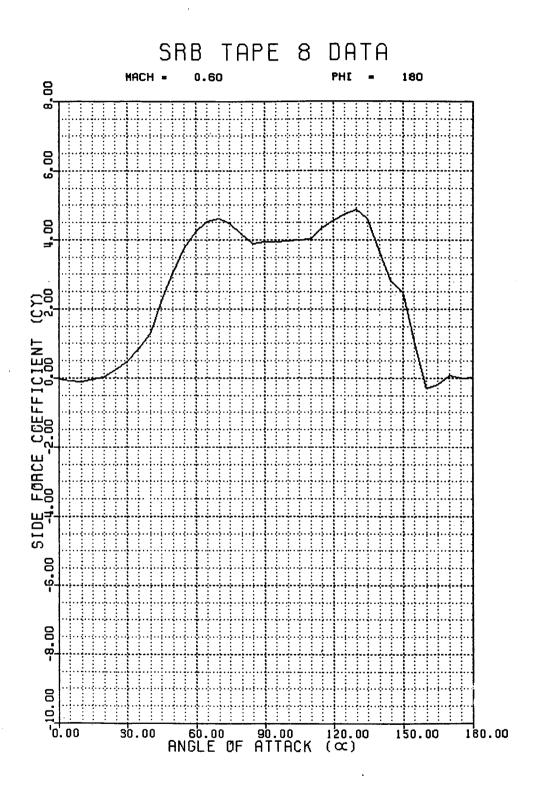


B-318

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

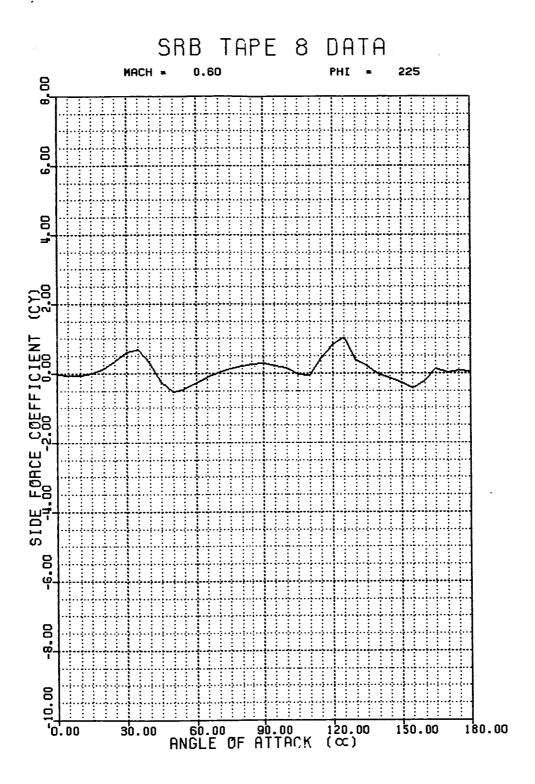


B-919
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

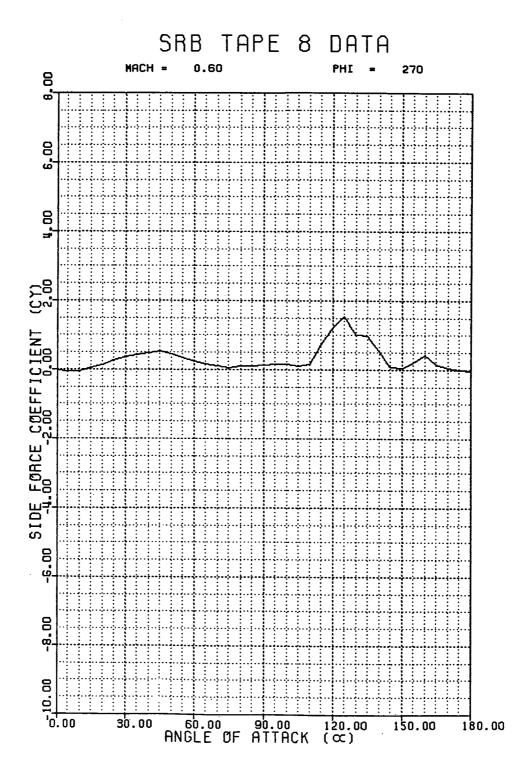


B-320

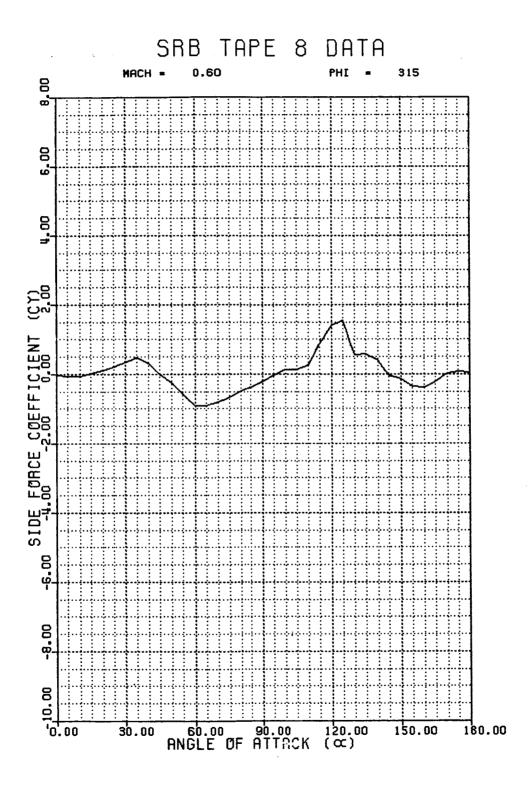
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



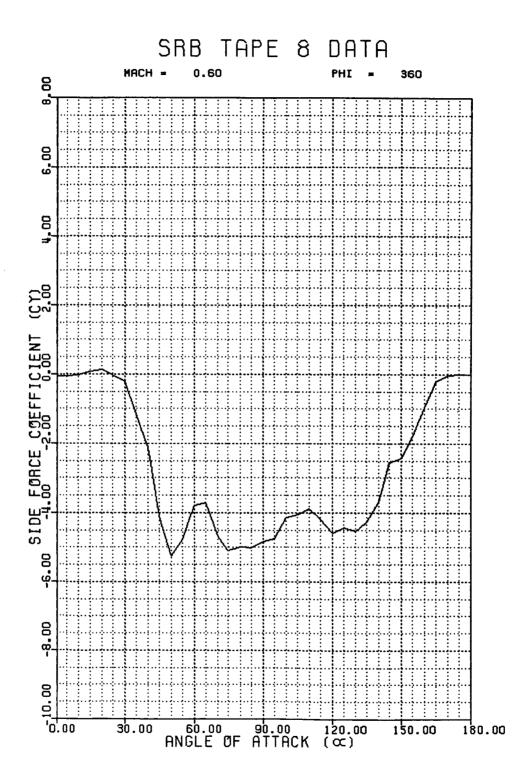
B-321



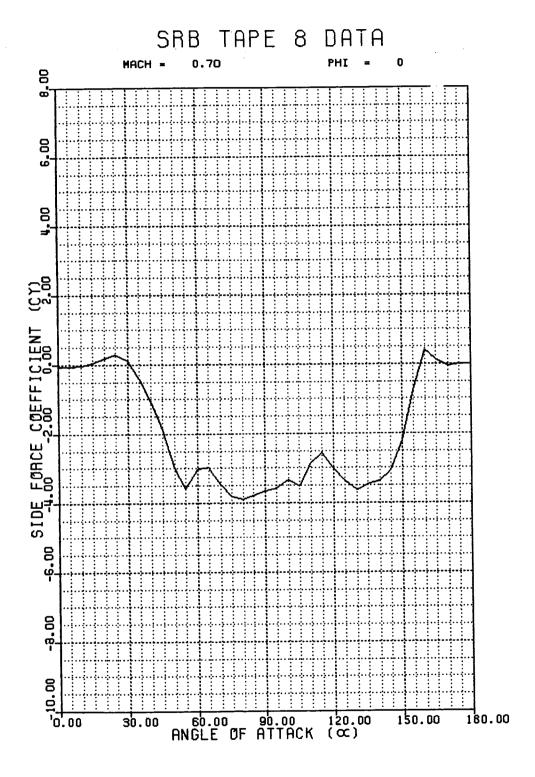
B-322
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



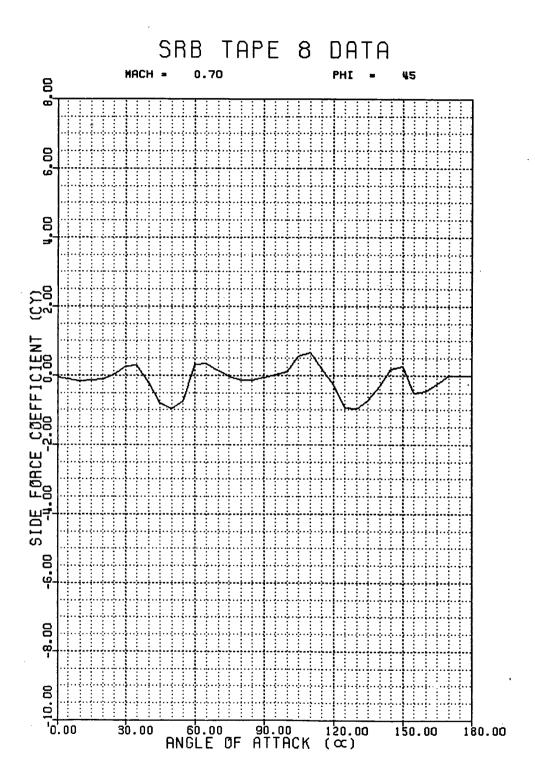
B-323



B-324
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

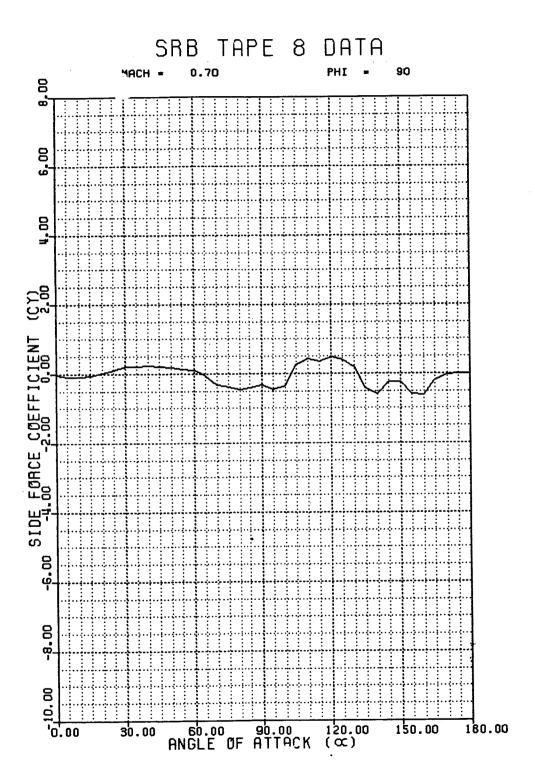


B-325

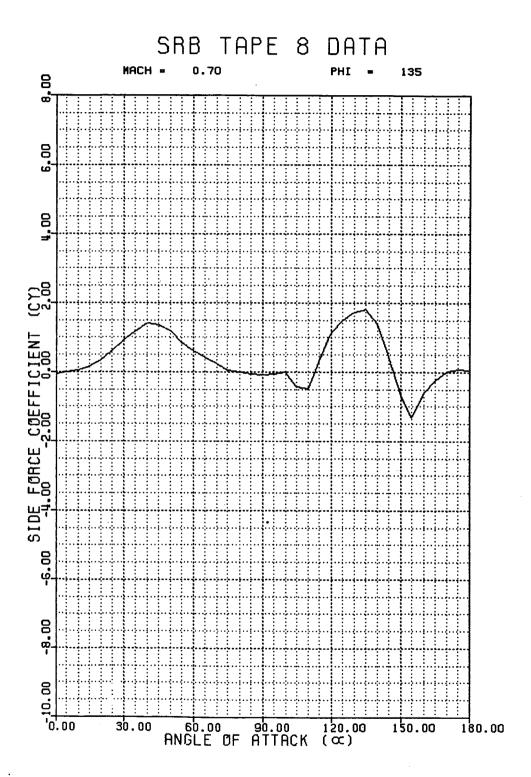


B-326

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

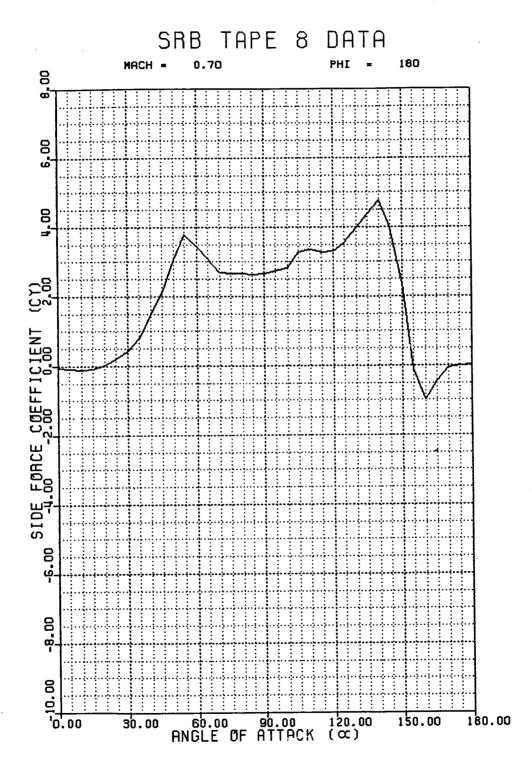


B-927

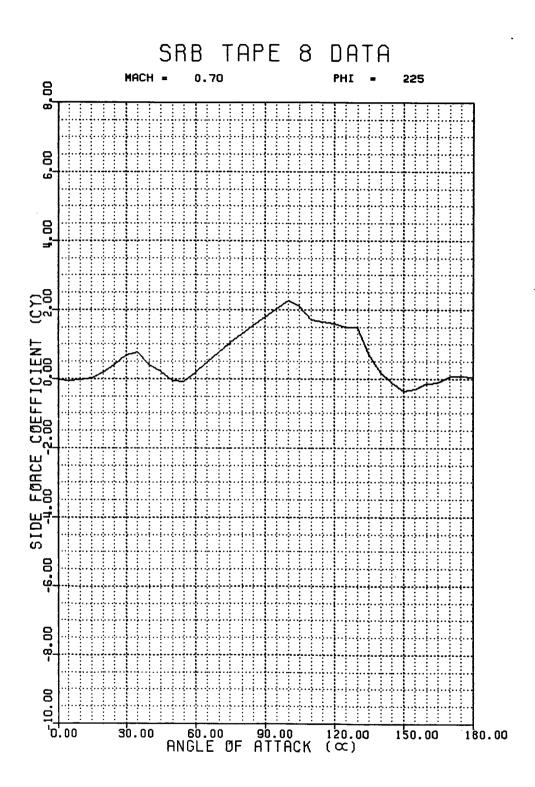


B-328

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

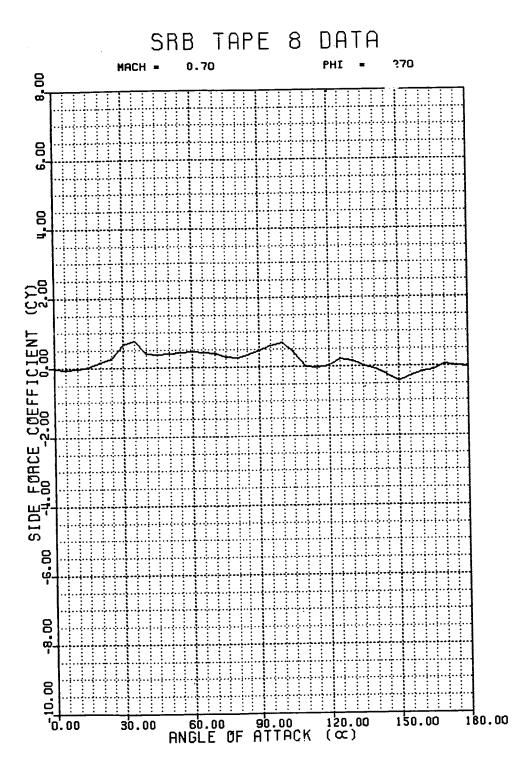


B-929

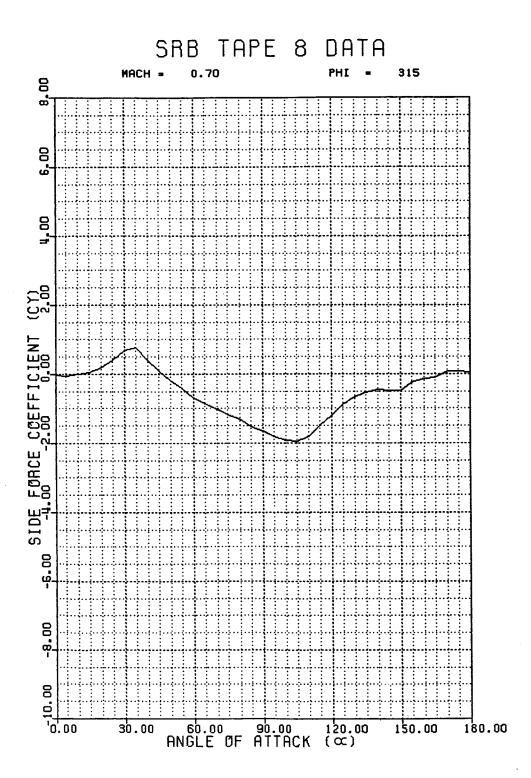


B-930

LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-991
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-332
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 360 8,00 6,00 **4**,00 SIDE FORCE COEFFICIENT -e-00 9.00 0.00

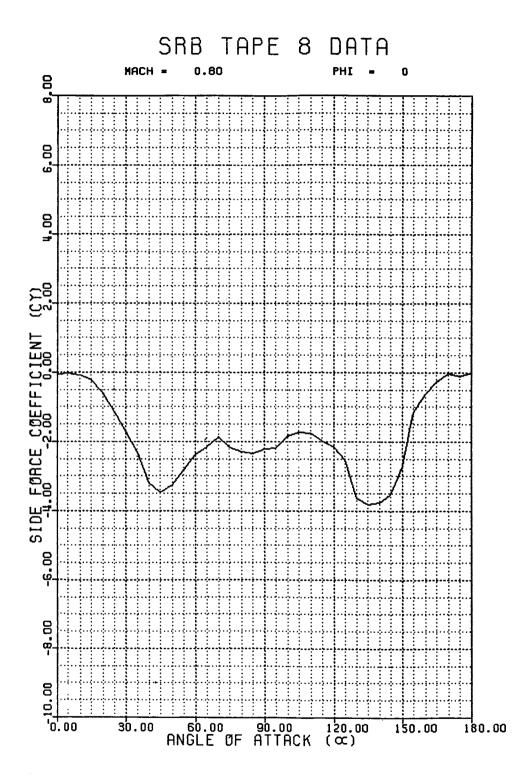
B-333

60.00 90.00 ANGLE OF ATTACK

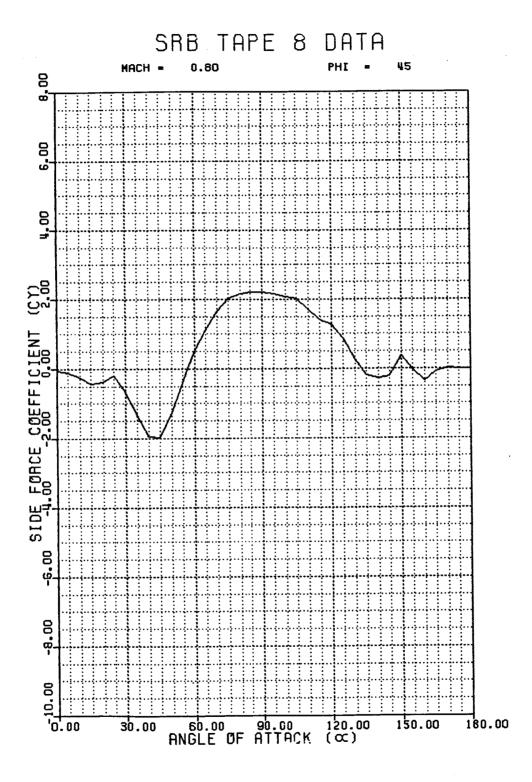
120.00 (∝)

150.00

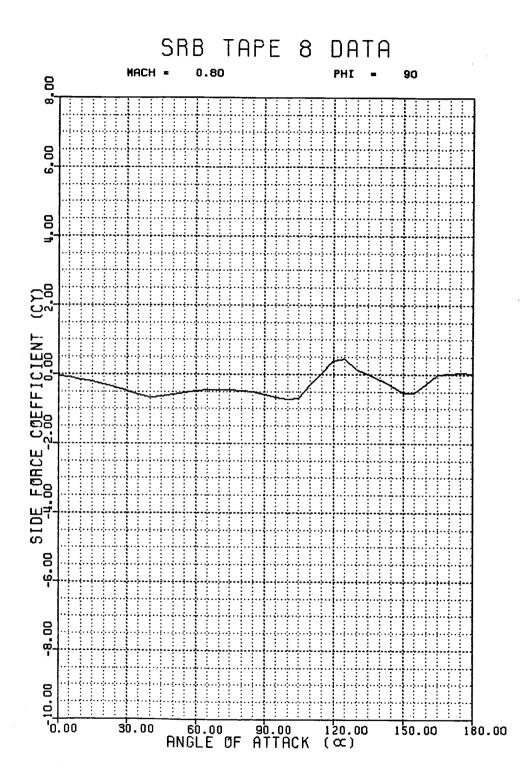
180.00



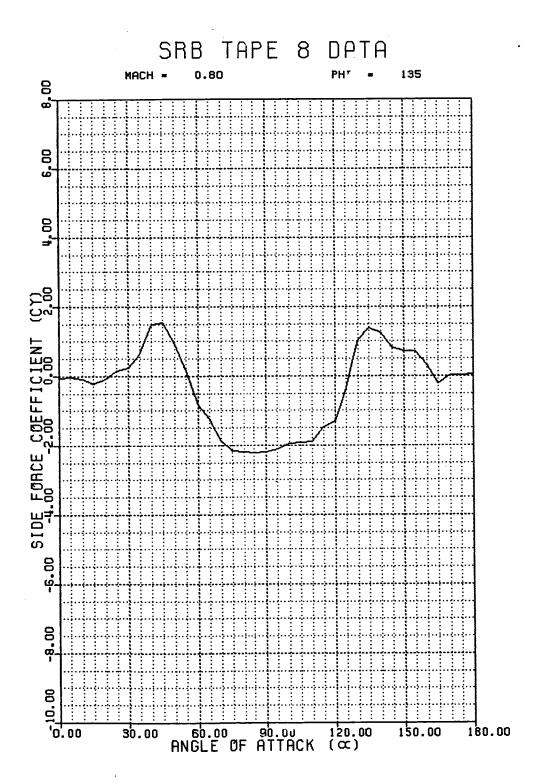
B-334
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



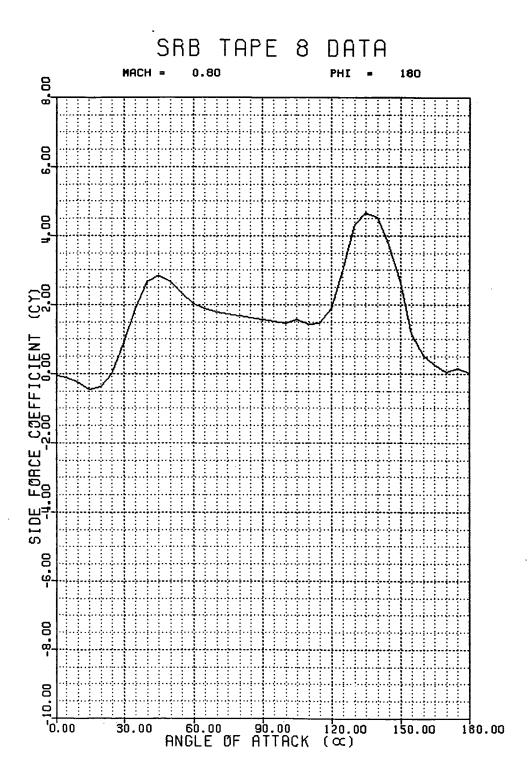
B-335
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-336

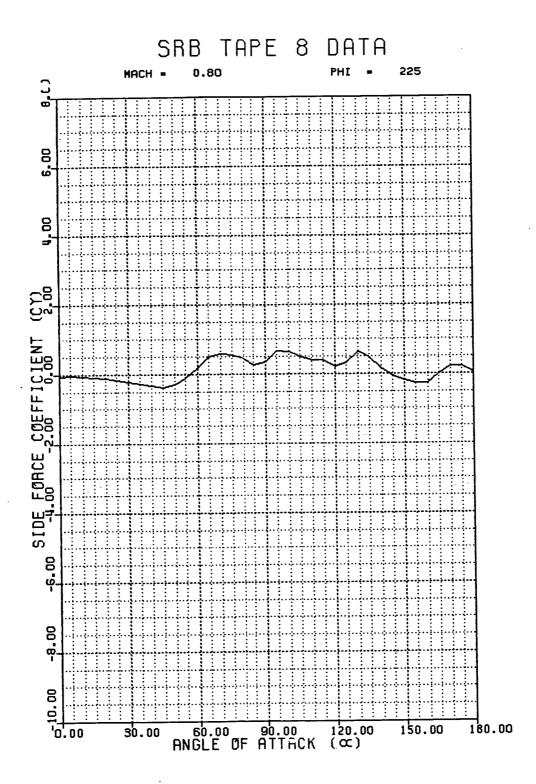


B-337

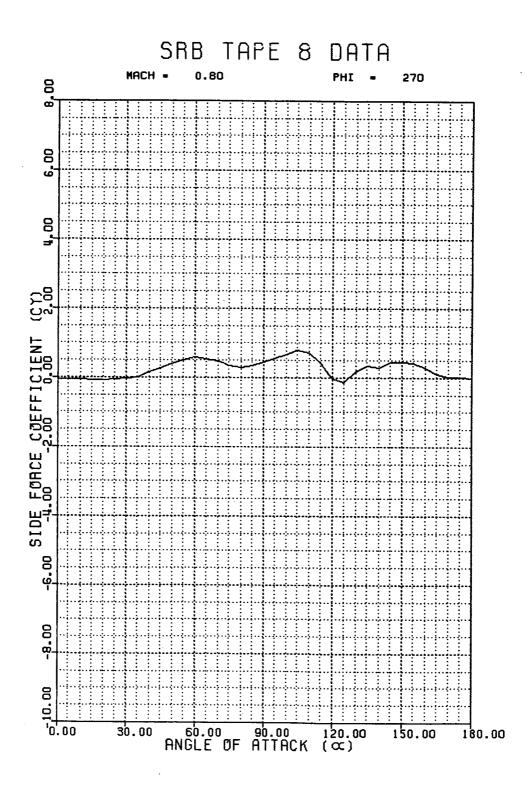


B-338

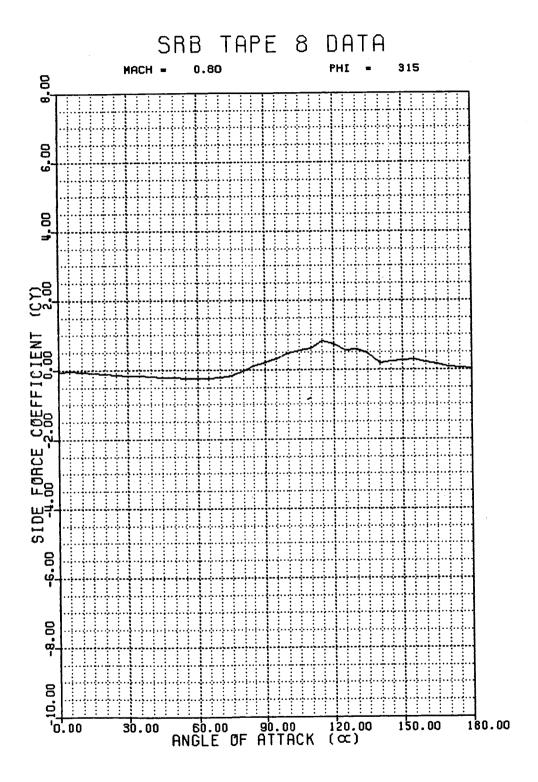
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



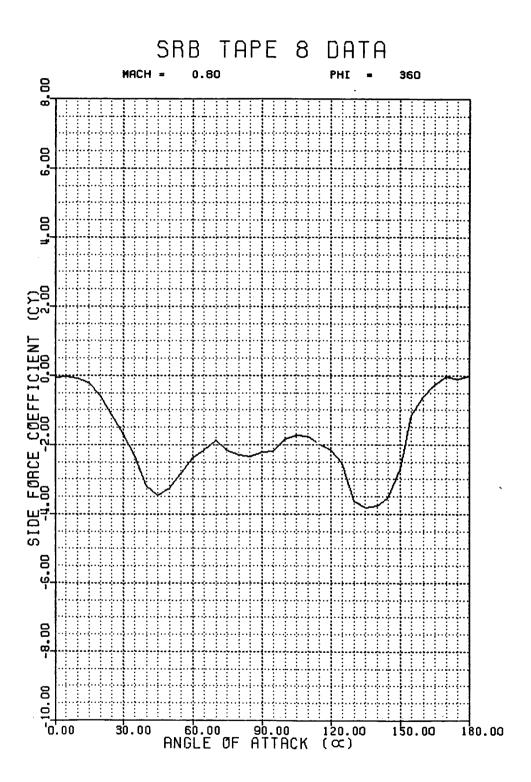
B-339
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



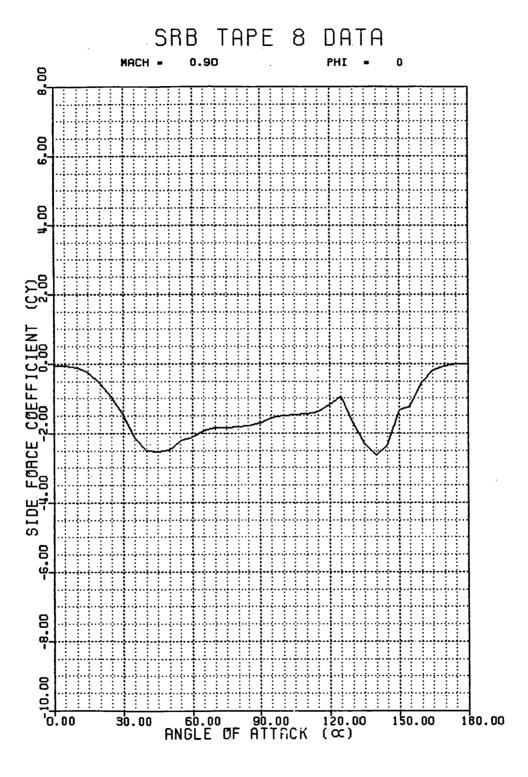
B-340
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



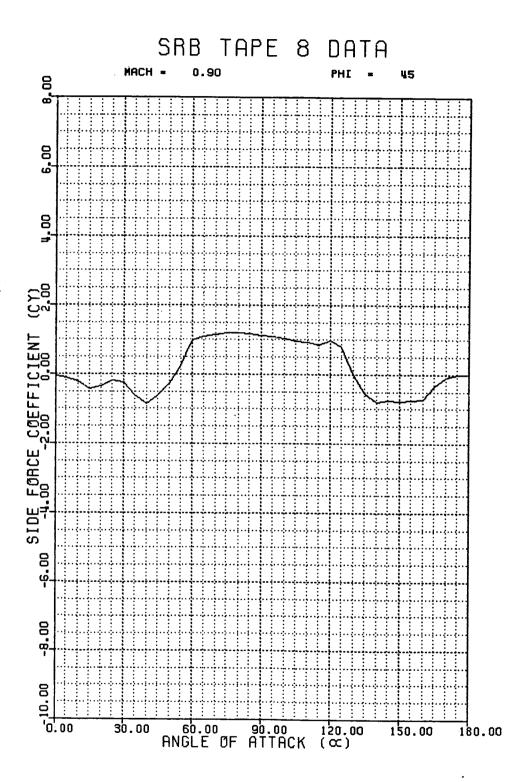
B-941
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-342
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

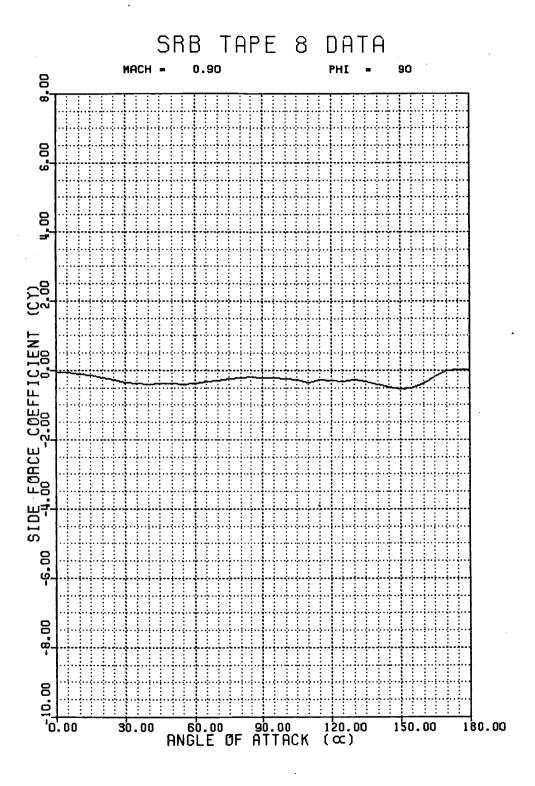


B-343
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

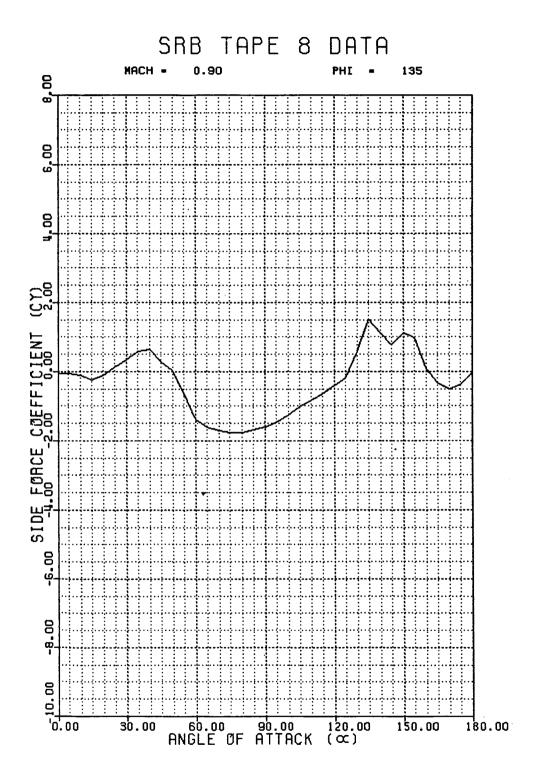


B-344

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

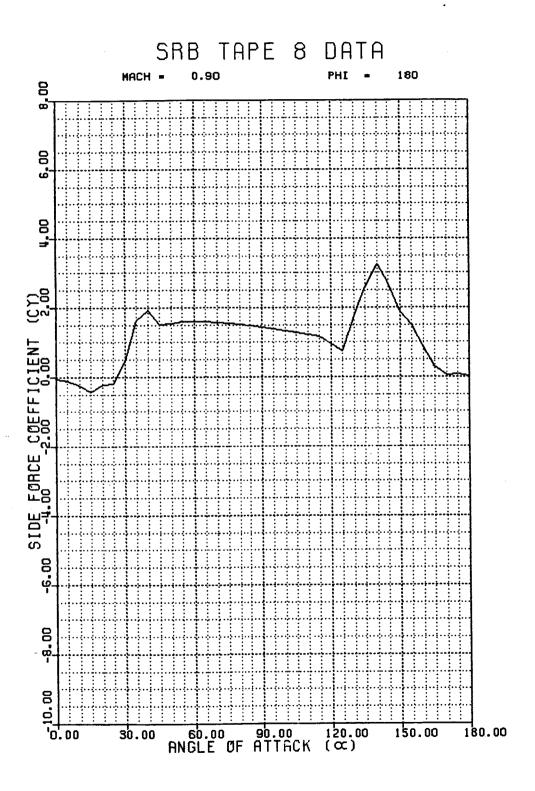


8-345
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



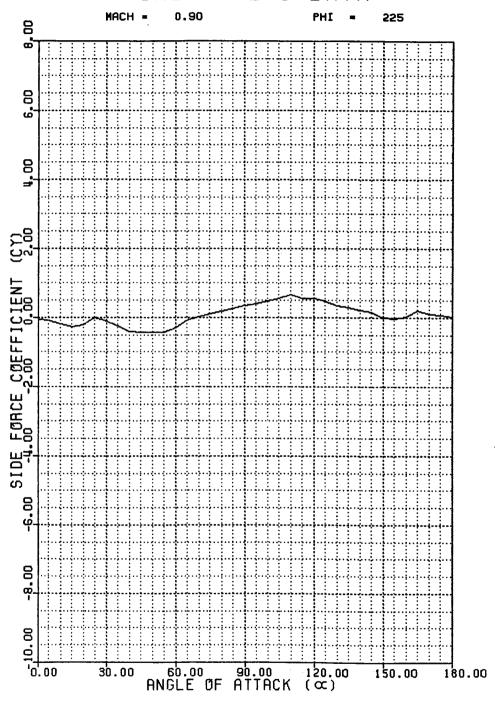
B-346

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



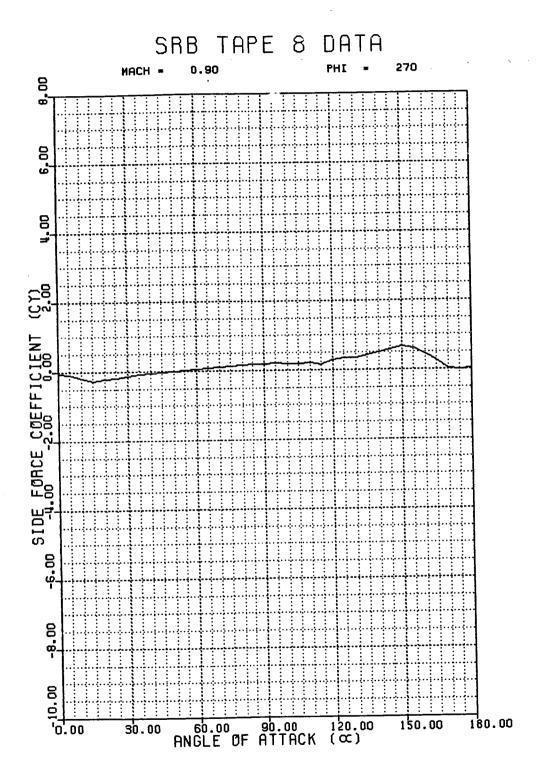
B-347
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

SRB TAPE 8 DATA

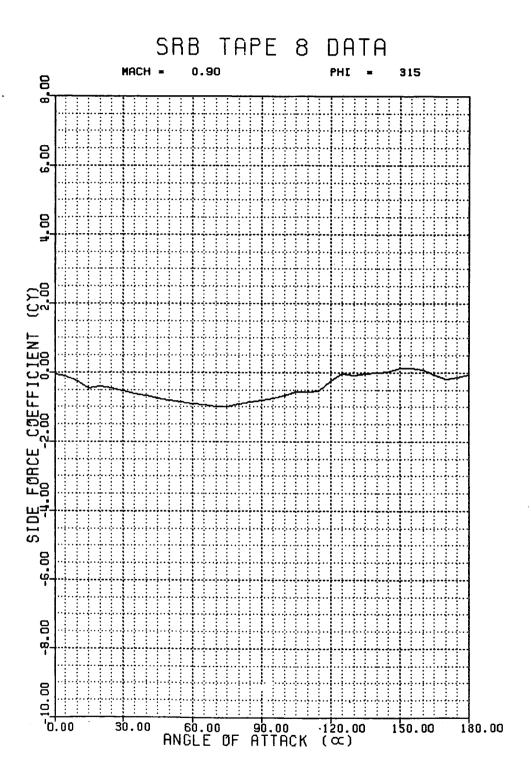


B-348

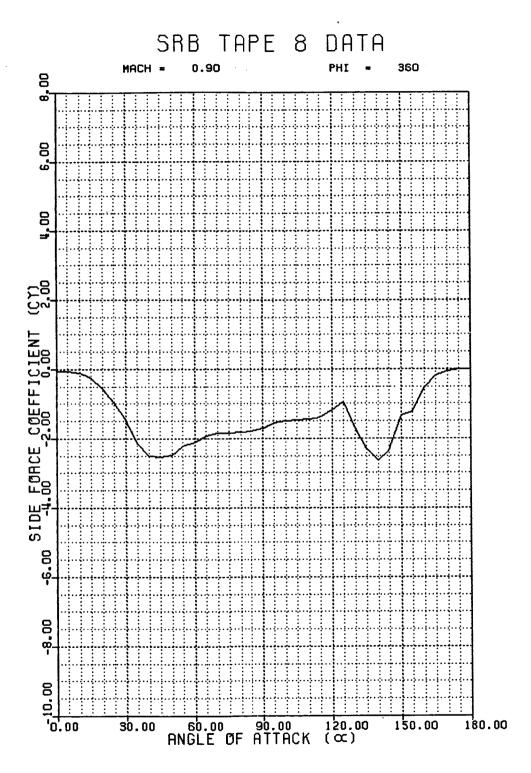
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-349
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



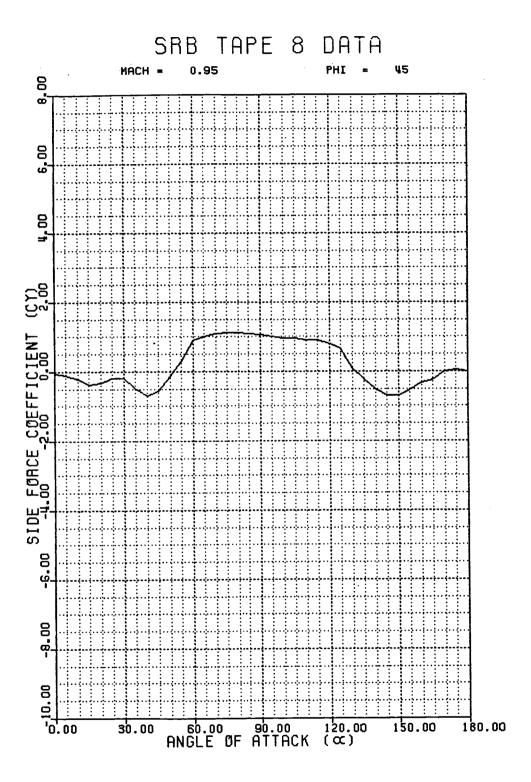
B-350
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



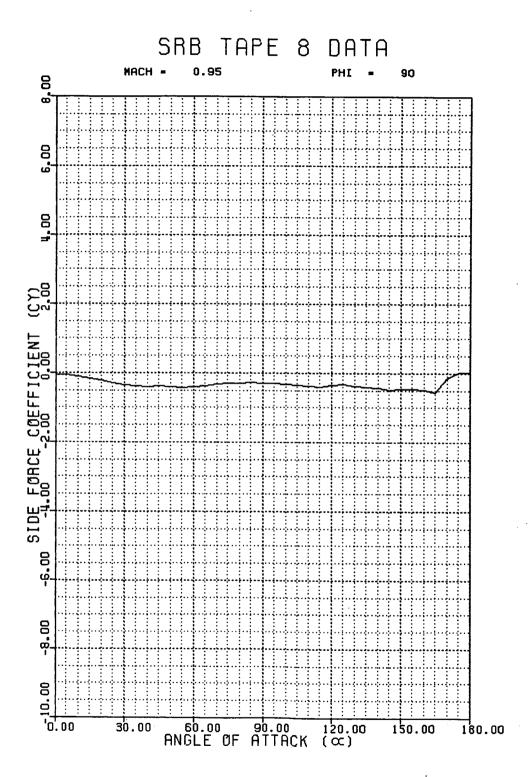
B-951
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 0.95 MACH = 8,00 6,00 ų, 00 SIDE FØRCE CØEFFICIENT -6.00 -8-00 0.00 60.00 90.00 ANGLE OF ATTACK 120.00 (C) 150.00 180.00

B-352
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

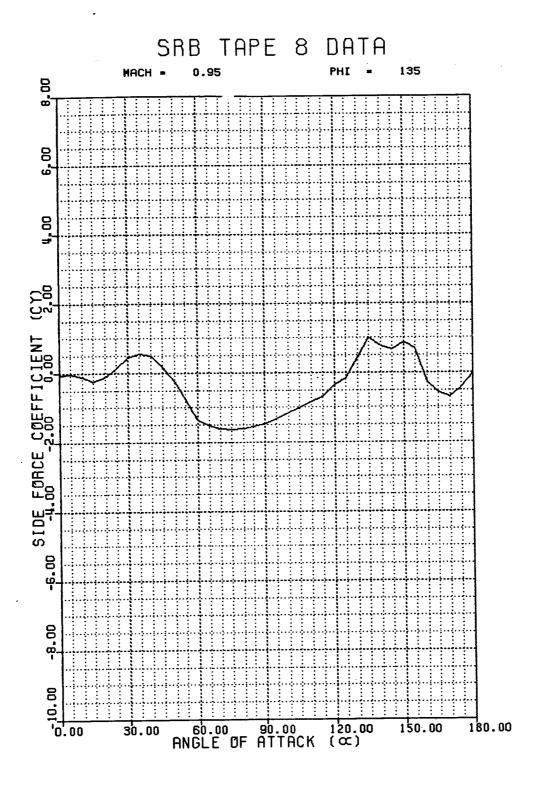


B-353
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-354

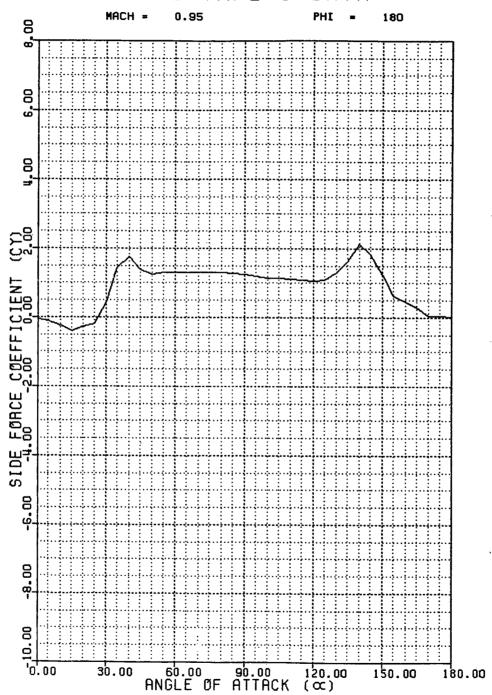
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



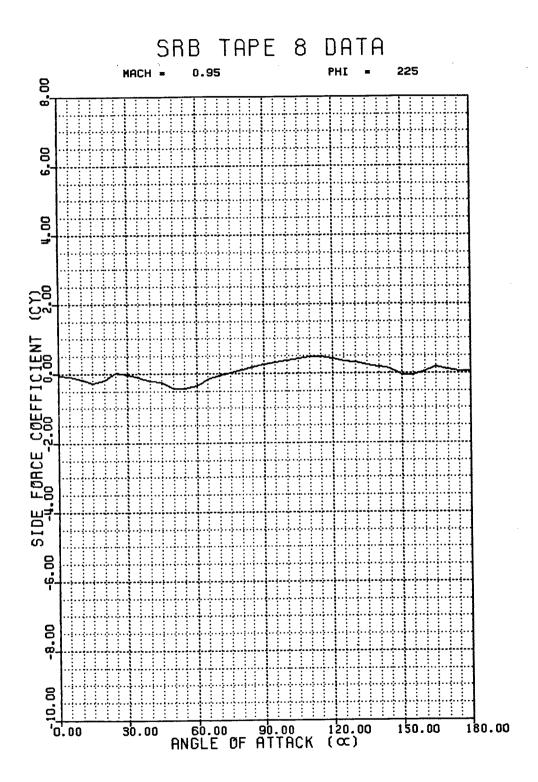
B-355

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

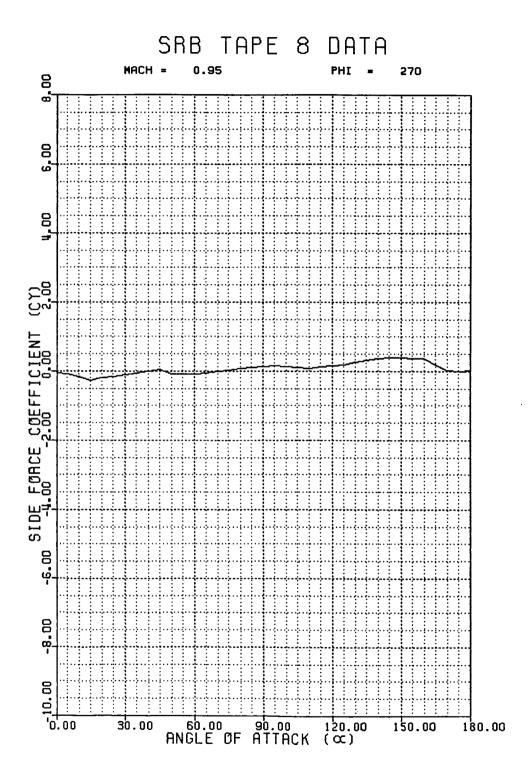
SRB TAPE 8 DATA



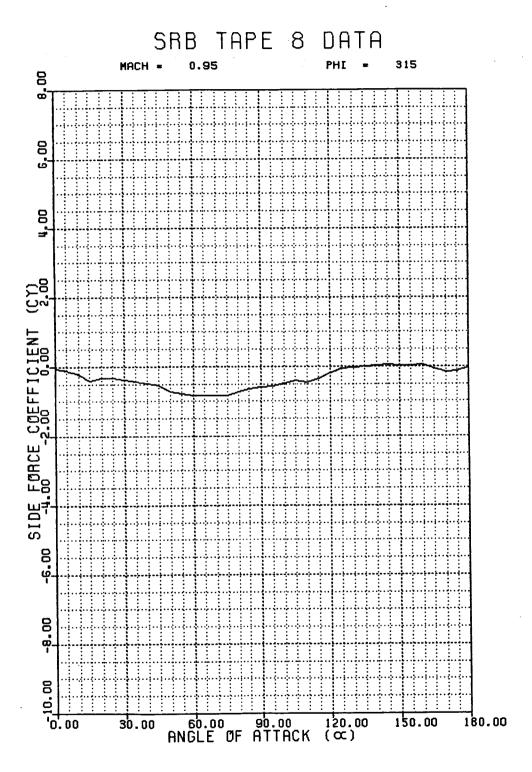
B-356



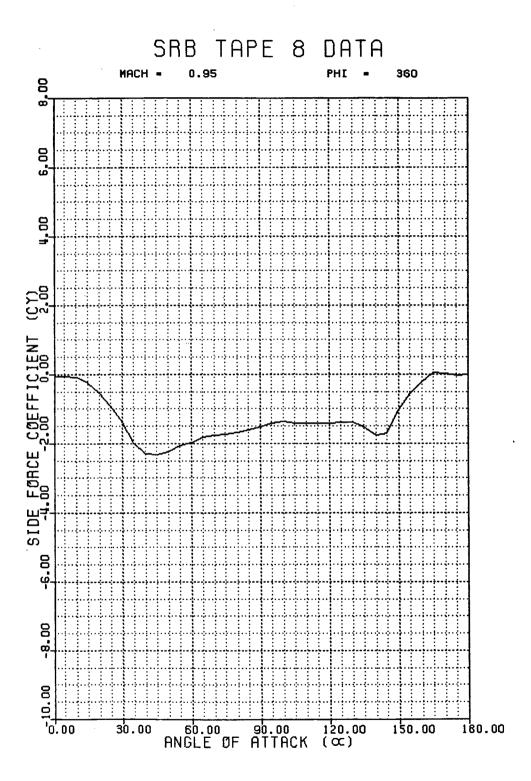
B-957
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



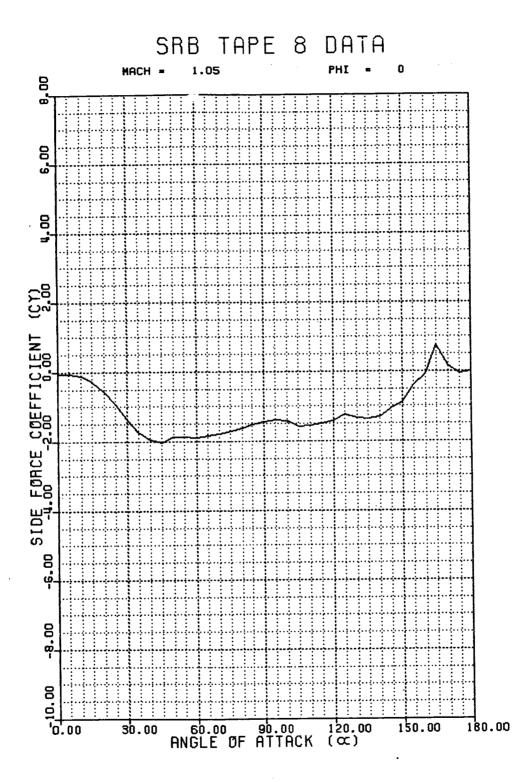
B-358
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



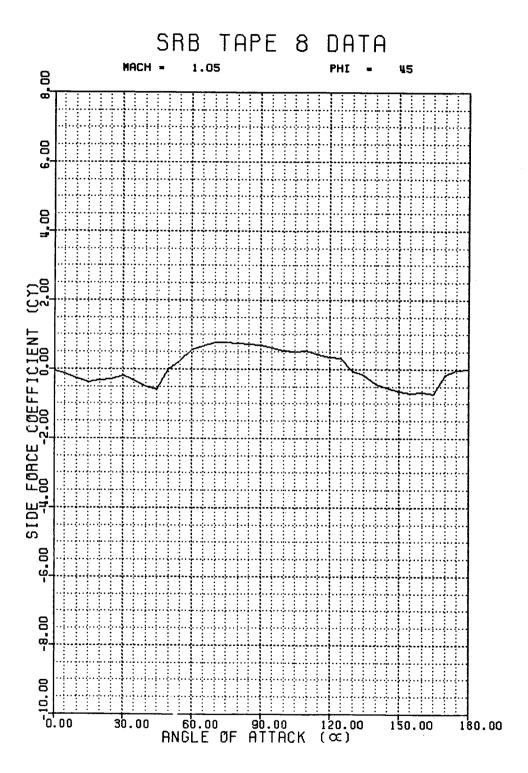
B-359



B-360
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-381
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



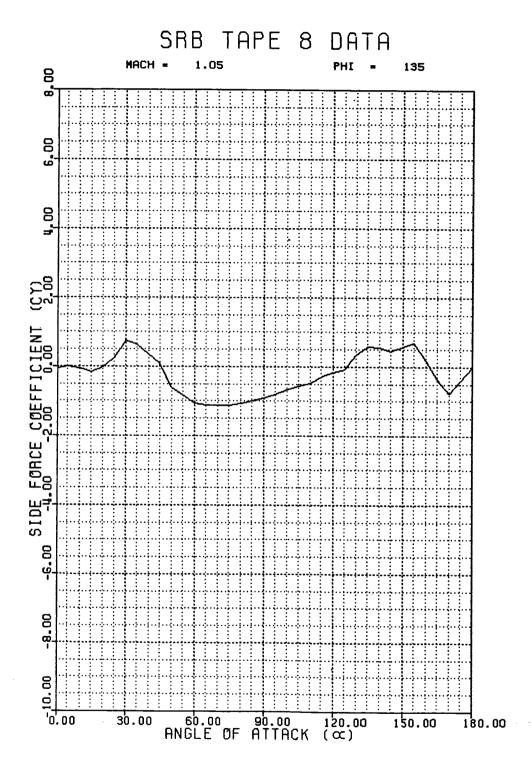
B-362

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

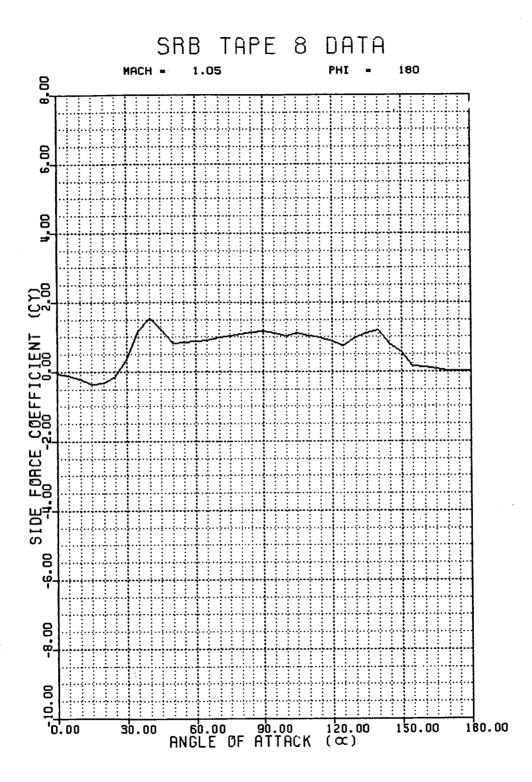
SRB TAPE 8 DATA MACH = 8.00 6.00 u, 00 SIDE FORCE COEFFICIENT -6.00 -8-00 00.00 60.00 90.00 ANGLE OF ATTACK 180.00

B-363 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

150.00



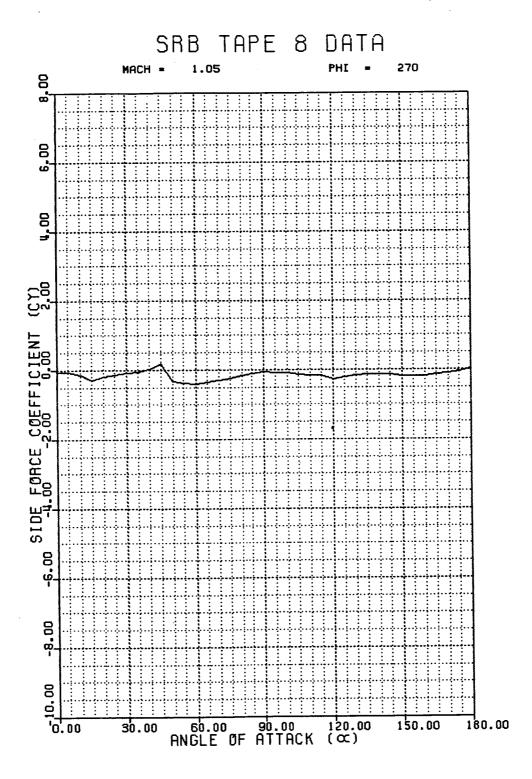
B-364 LUCKHEED-HUNTSVILLE ENGINEERING CENTER



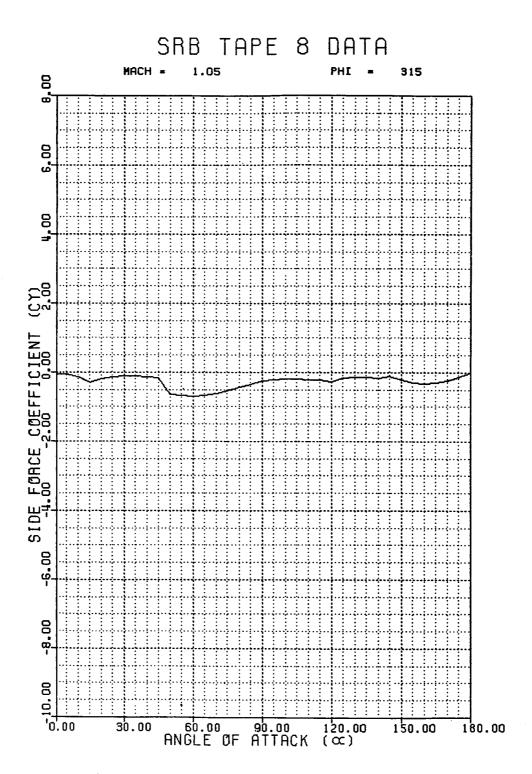
B-965
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 225 8,00 6,00 ų, 00 SIDE FORCE COEFFICIENT 00**.**9--8.00 00.00 60.00 90.00 ANGLE OF ATTACK 30.00 120.00 (∝) 150.00 180.00

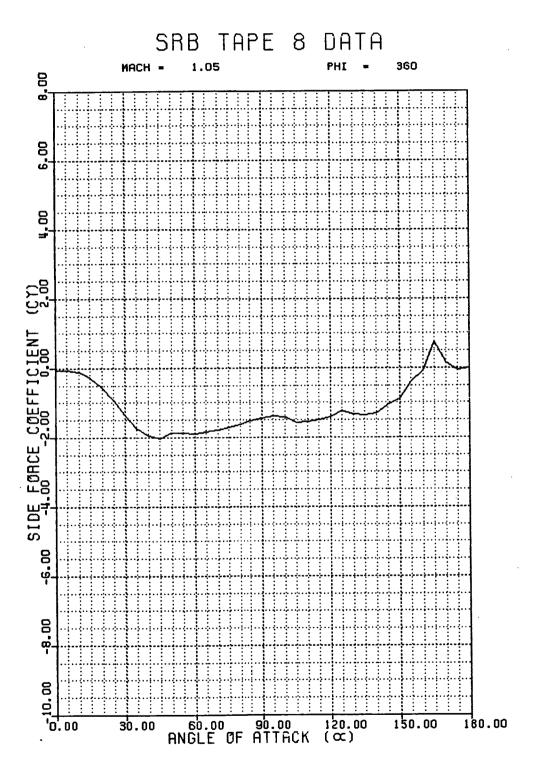
B-366



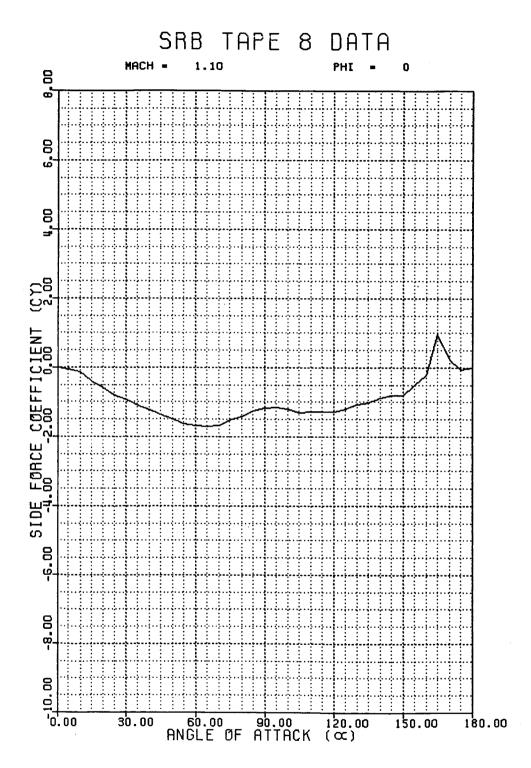
B-367
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



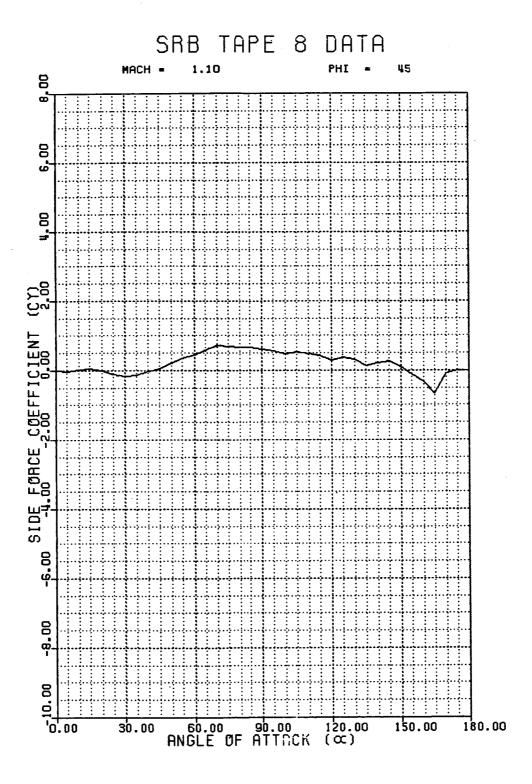
B-368



B-369

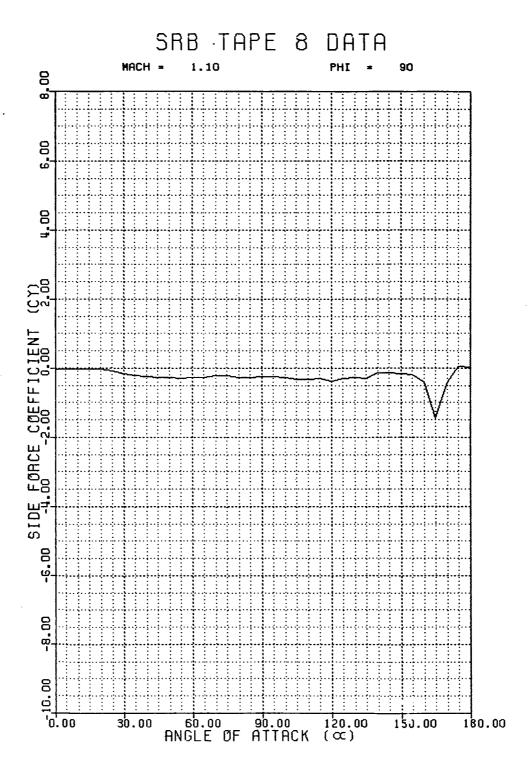


B-370
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



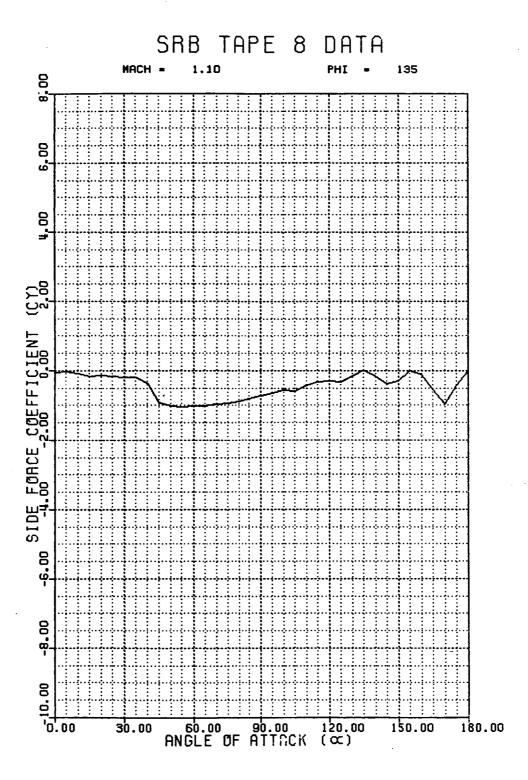
B-371

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



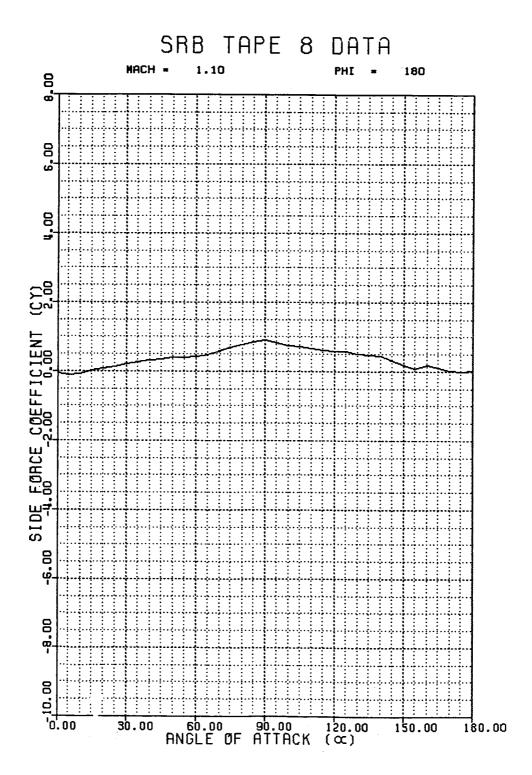
B-372

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

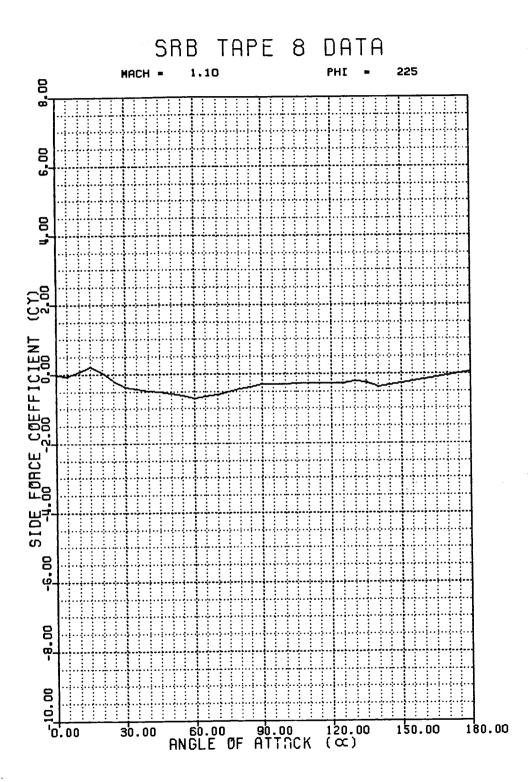


B-973

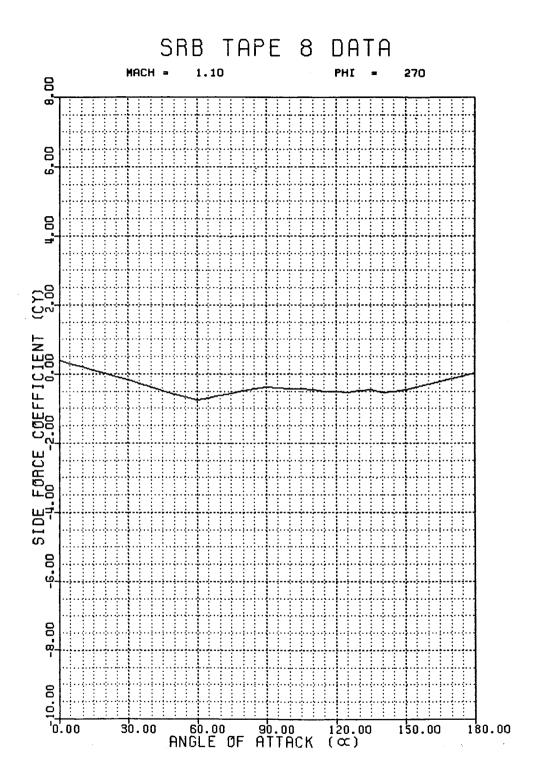
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



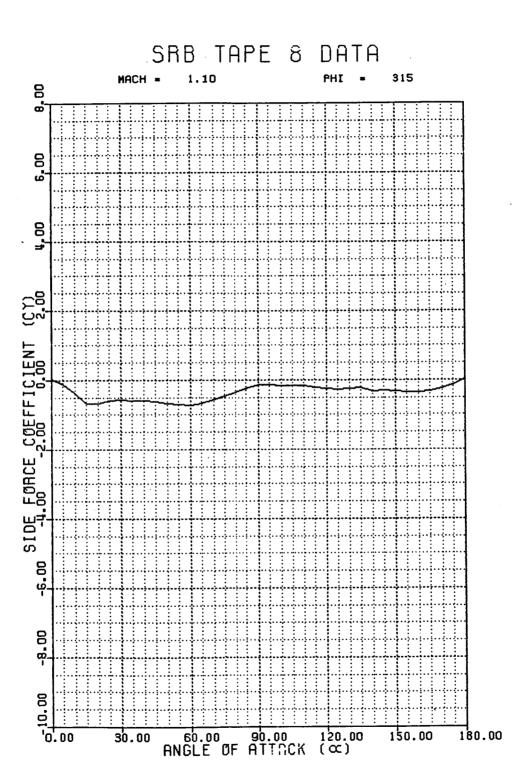
B-374
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-375

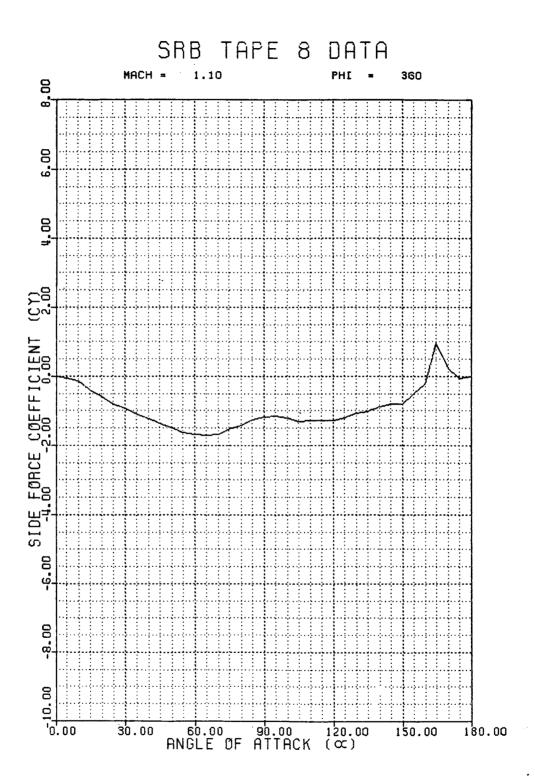


B-376
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-377

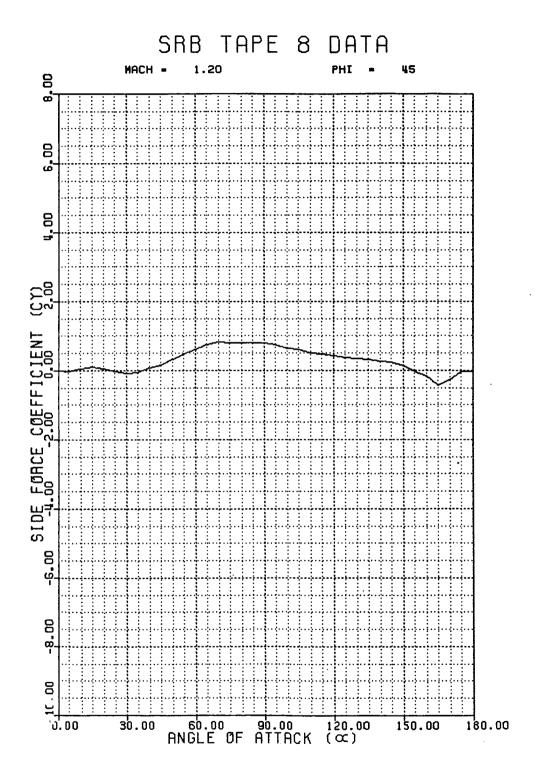
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-378
LÖCKHEED-HUNTSVILLE ENGINEERING CENTER

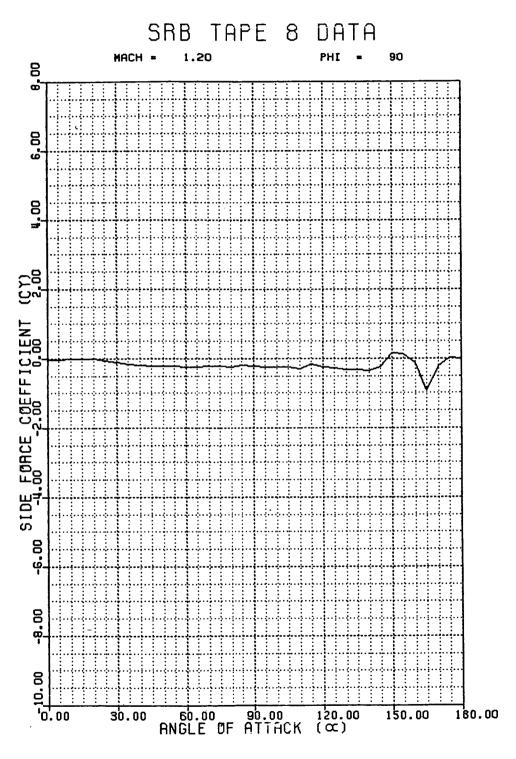
SRB TAPE 8 DATA P 6,00 **t**, 00 SIDE FORCE COEFFICIENT -6.00 -8.00 00.00 60.00 90.00 ANGLE OF ATTACK 150.00 180.00 30.00

B-979



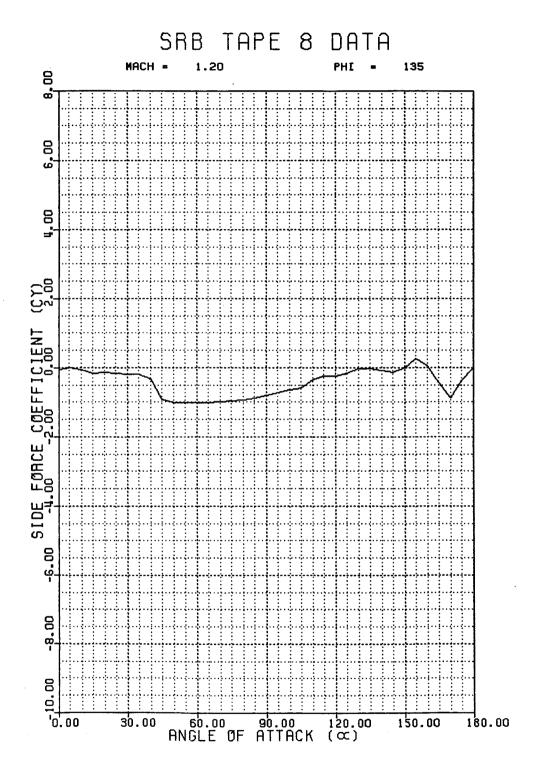
B-380

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

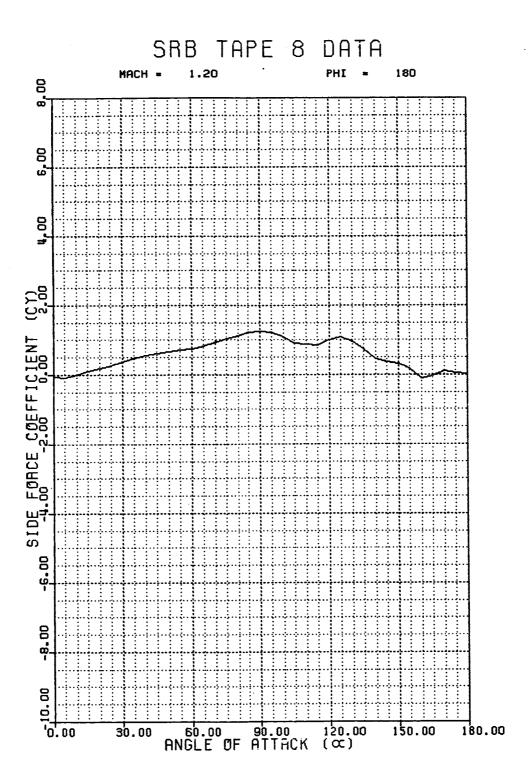


B-381

C - 5



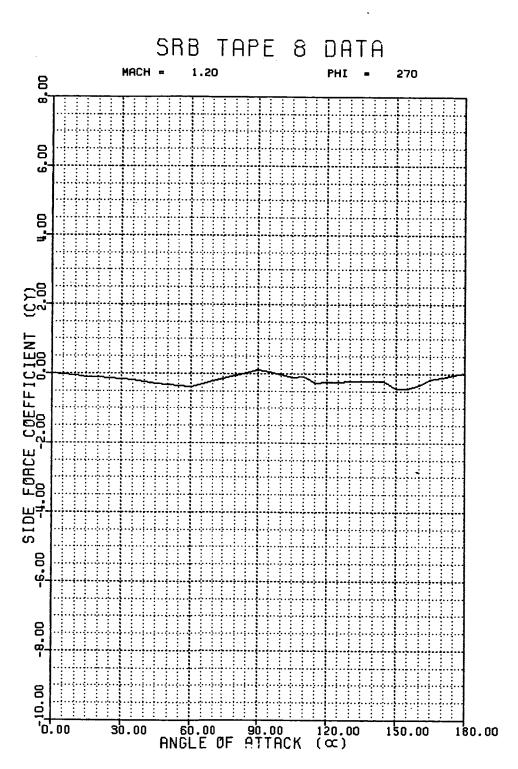
B-382
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



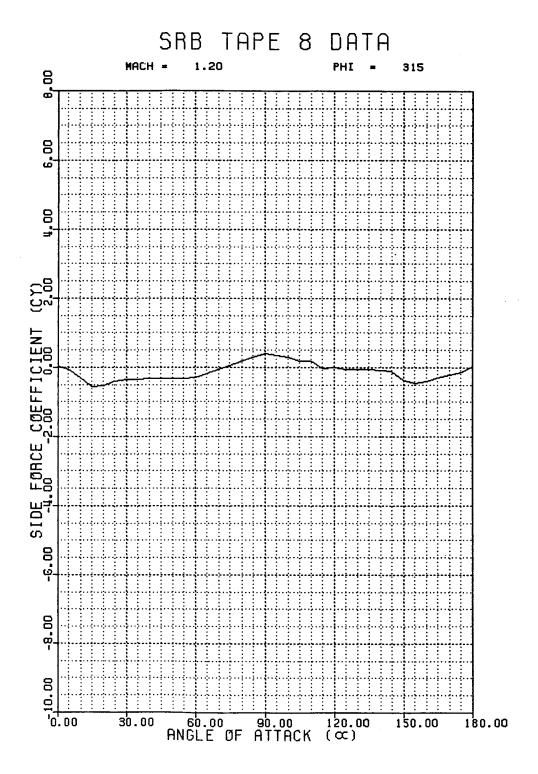
B-383
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

SRB TAPE 8 DATA 1.20 225 8,00 6.00 u. 00 (CY) SIDE FORCE COEFFICIENT -6.00 -8.00 00.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 30.00 150.00 180.00

B-384
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

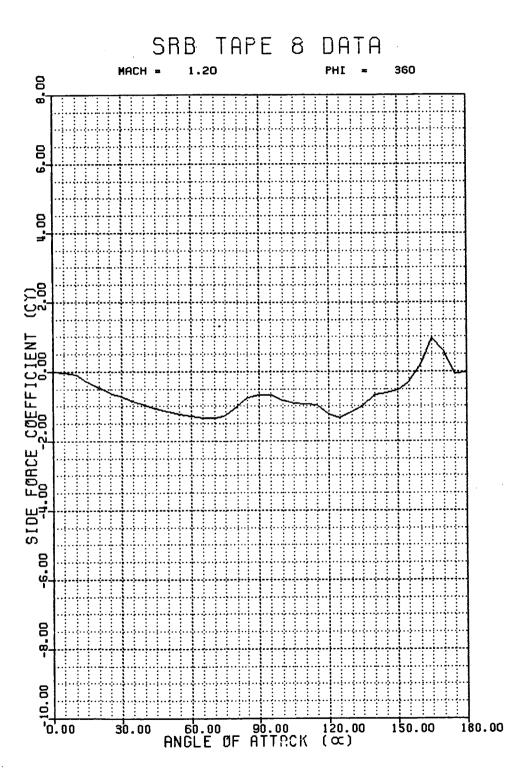


B-385

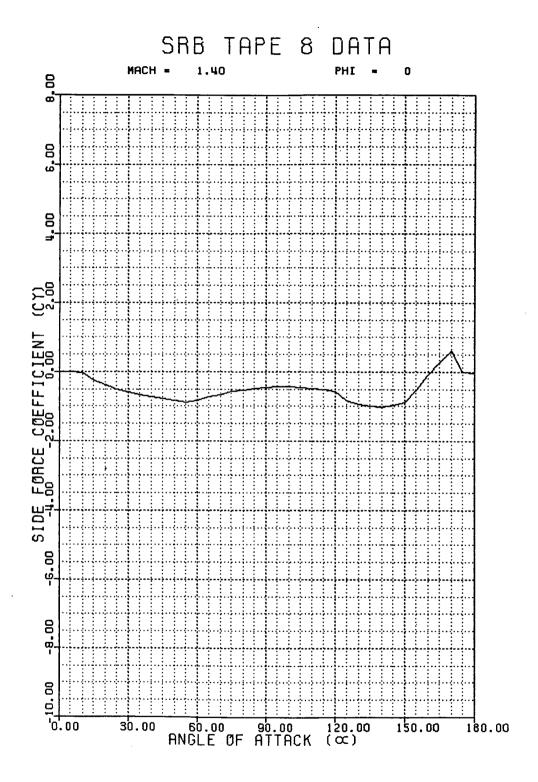


B-386

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

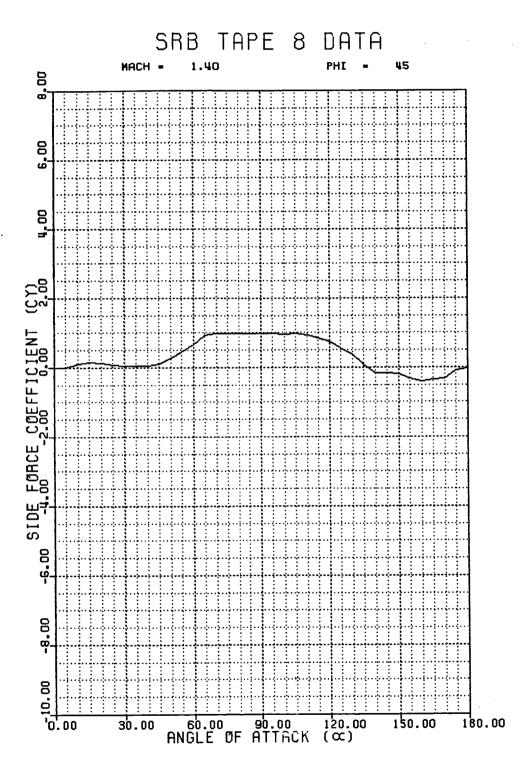


B-387

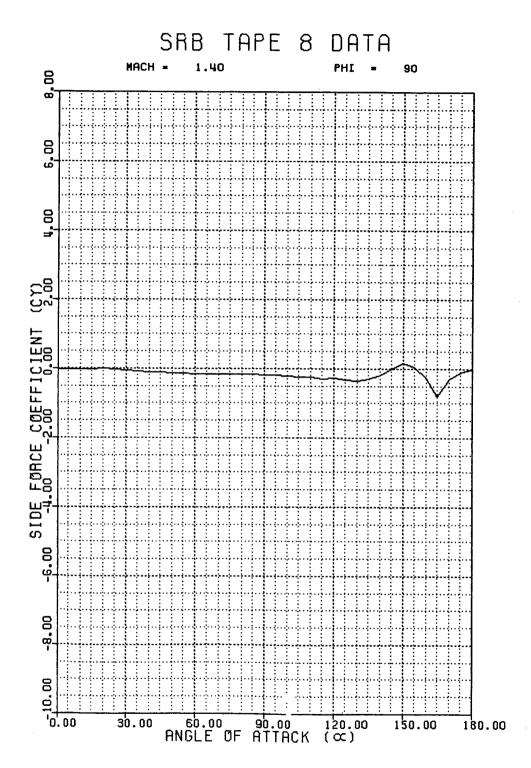


B-388

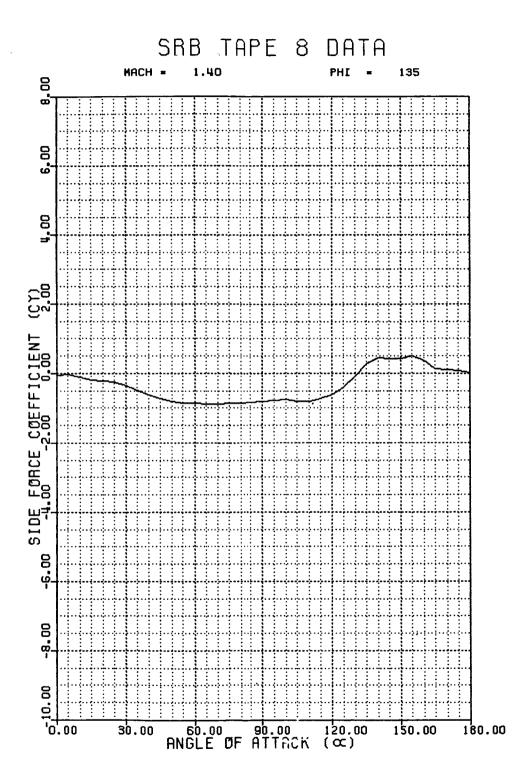
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-389
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



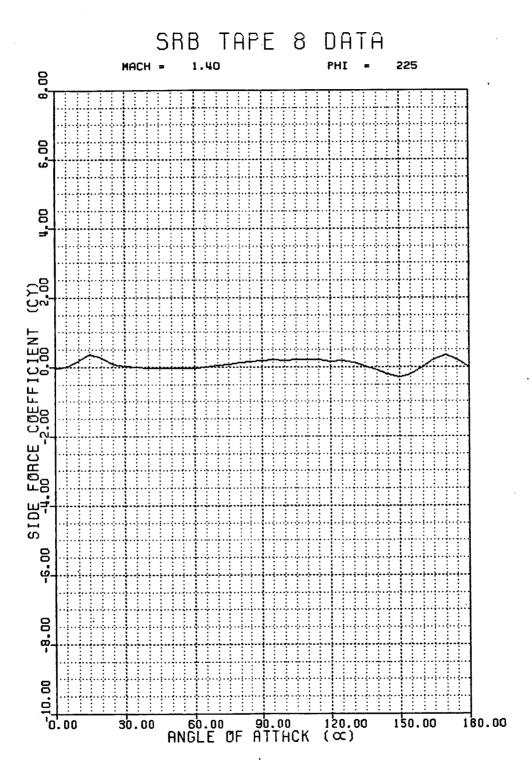
B-390
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



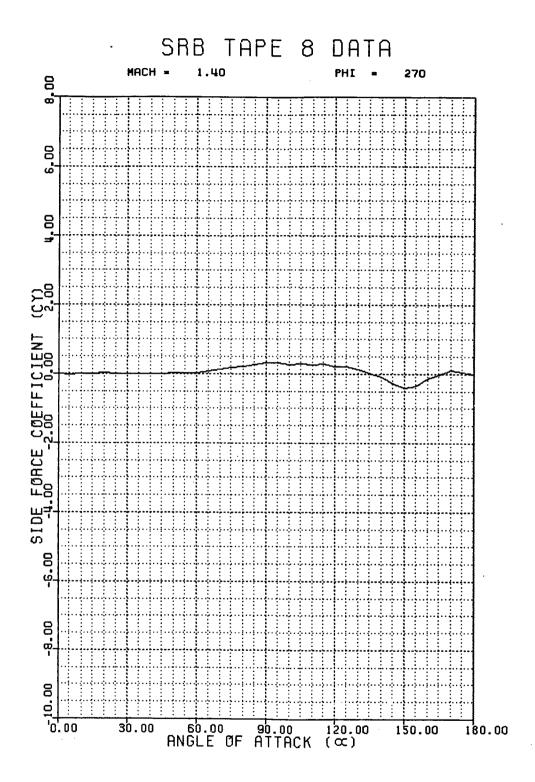
8-391

SRB TAPE 8 DATA 180 8,00 6,00 SIDE FORCE COEFFICIENT -6.00 -8-00 0.00 60.00 90.00 ANGLE OF ATTACK 30.00 120.00 (∝) 150.00 180.00

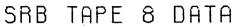
B-392
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

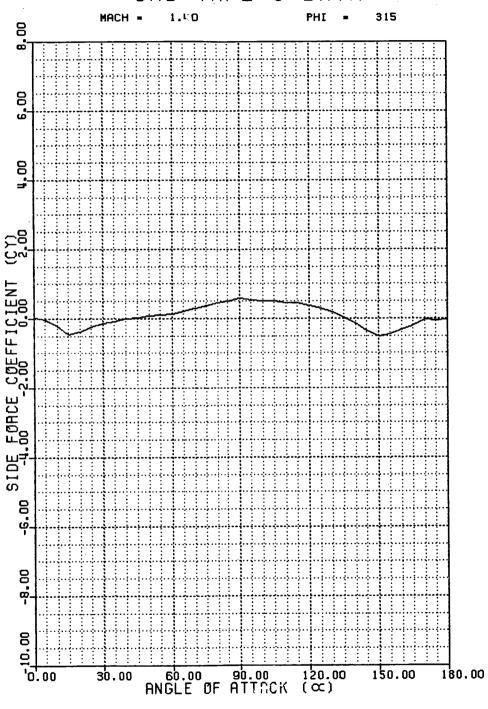


B-393

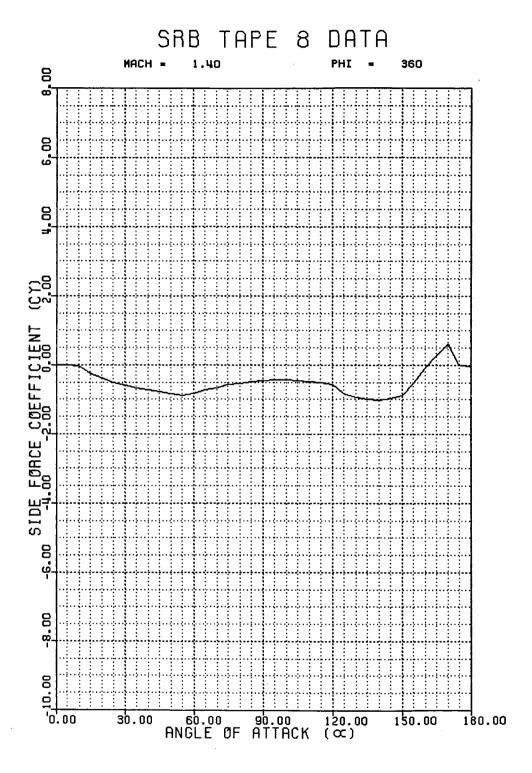


B-394 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

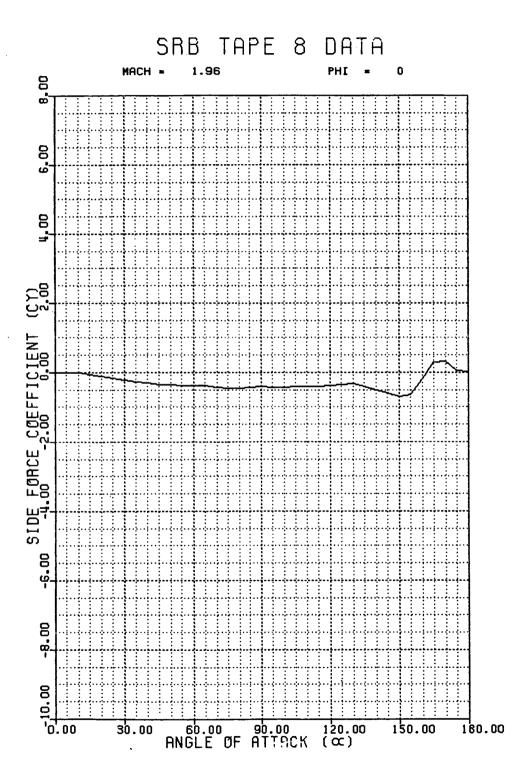




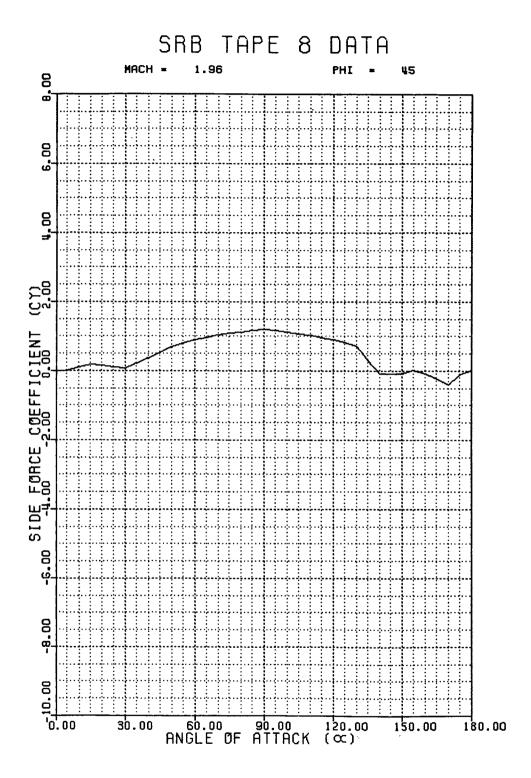
B-395



B-396
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

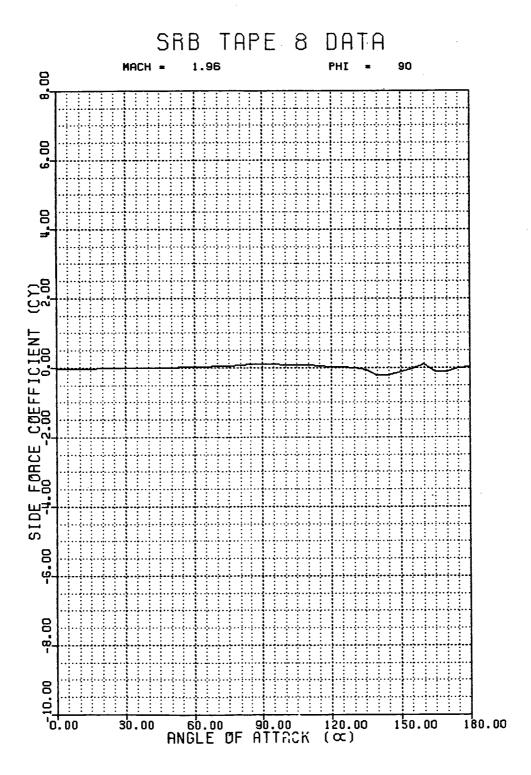


B-397

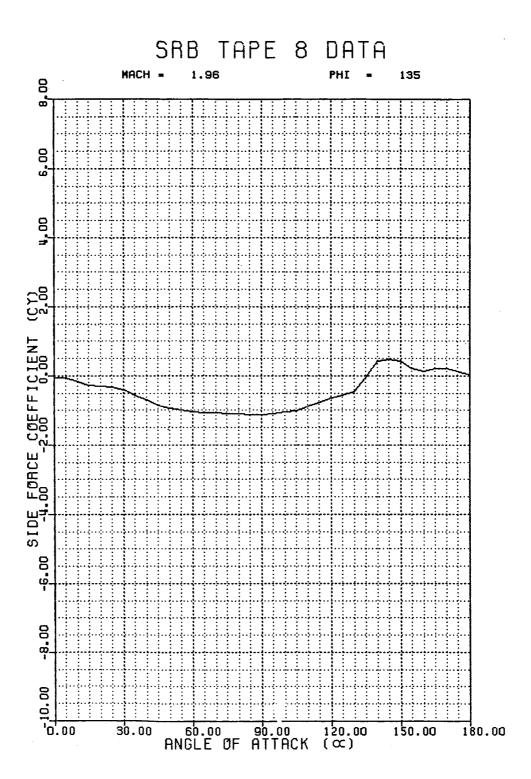


B-398

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

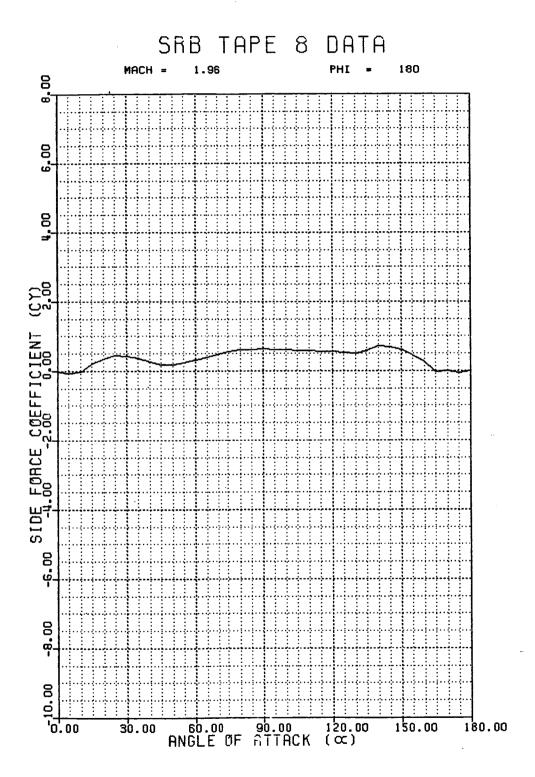


B-399



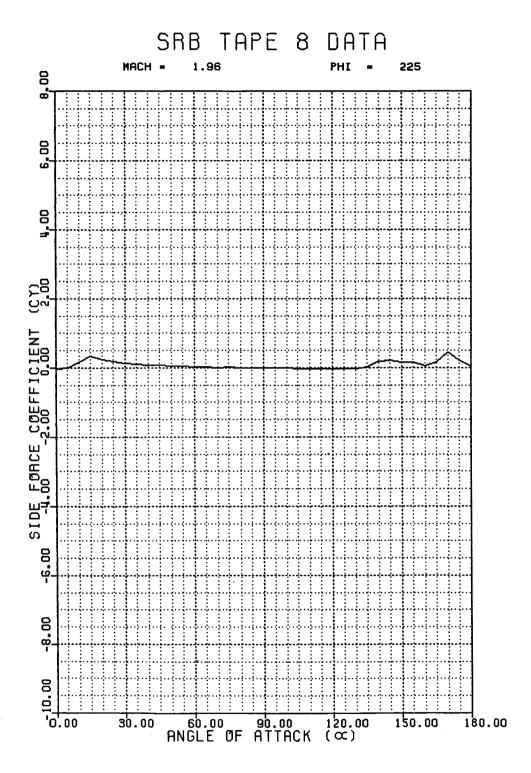
B-400

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



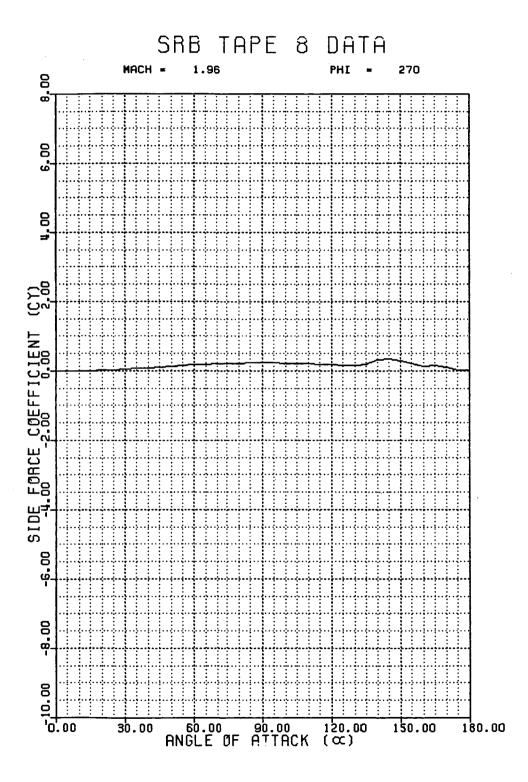
B-401

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



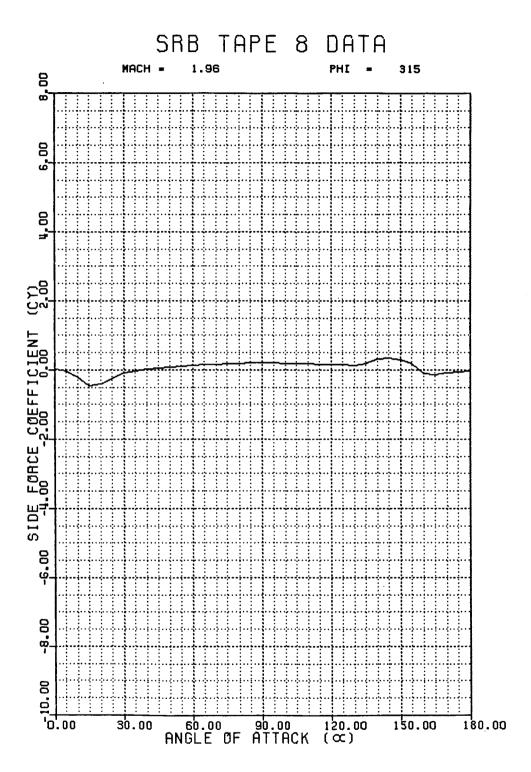
B-402

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-403

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

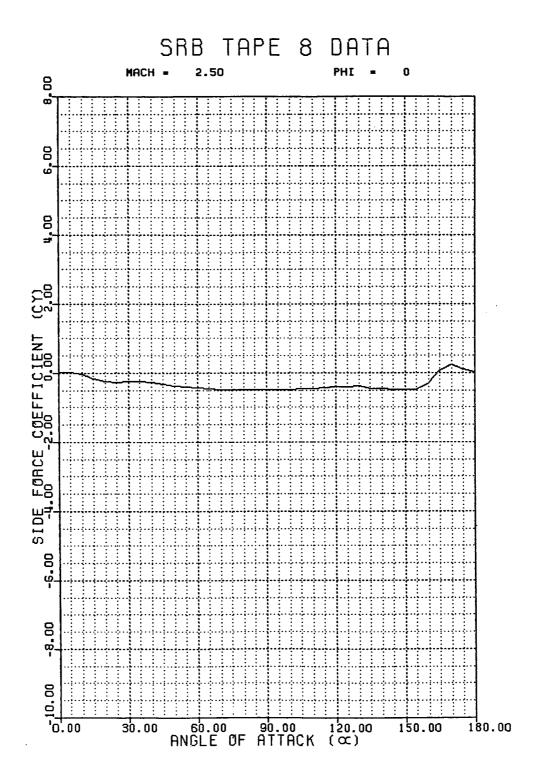


B-404
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 360 9,00 6.00 **1,** 00 SIDE FORCE COEFFICIENT -e.00 -9.00 00.00 60.00 90.00 120.00 ANGLE ØF HITACK (∝) 150.00 180.00 30.00

B-405

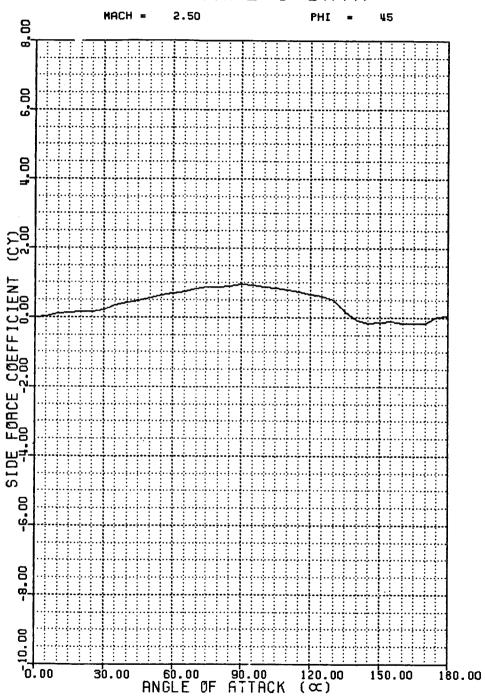
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



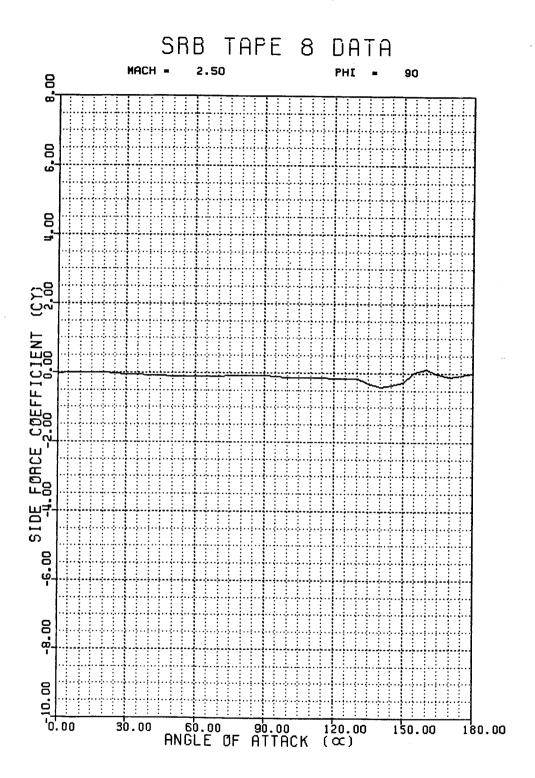
B-406

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

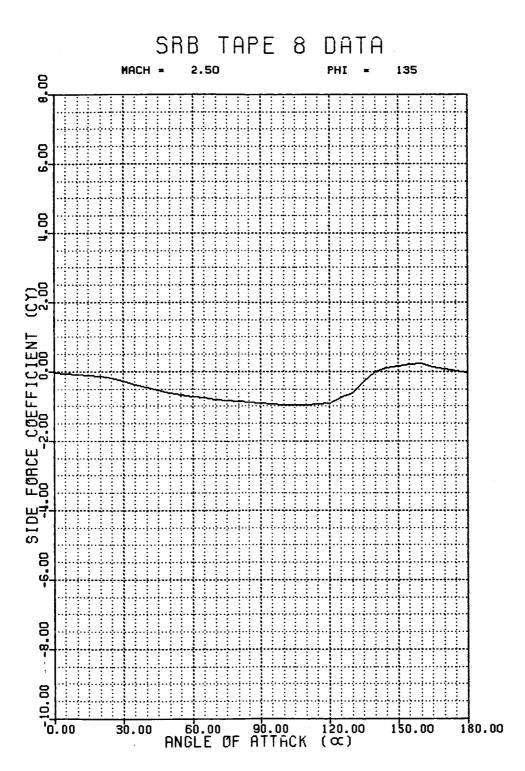




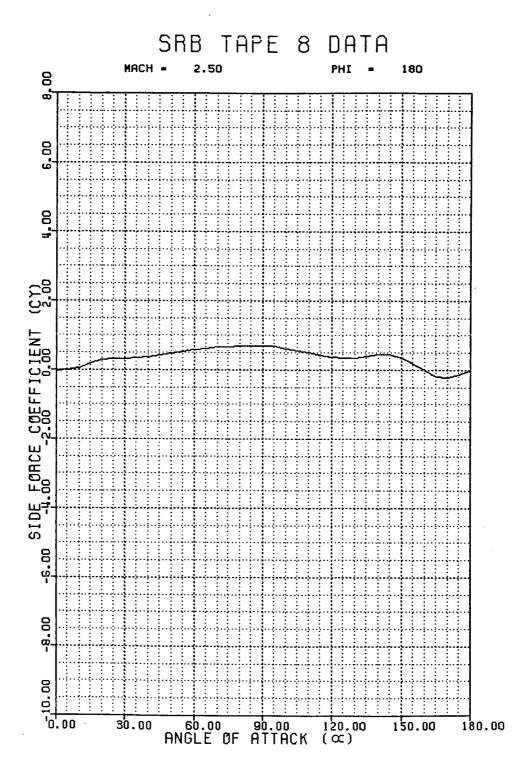
B-407



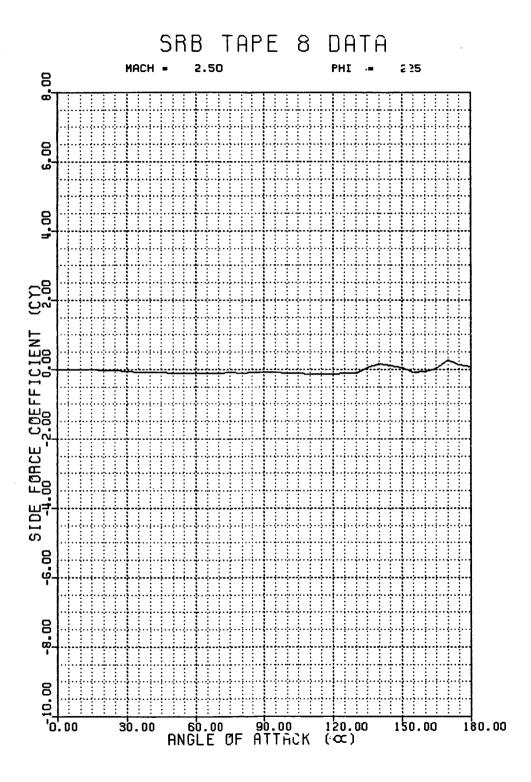
B-408
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



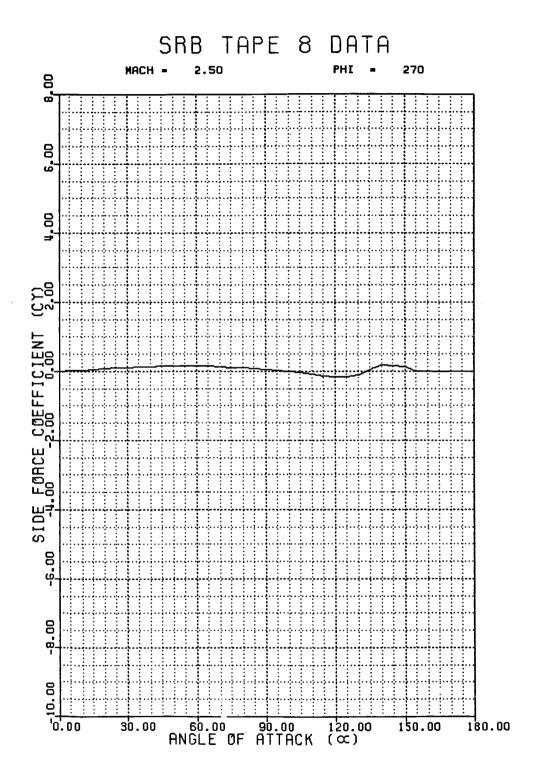
B-409



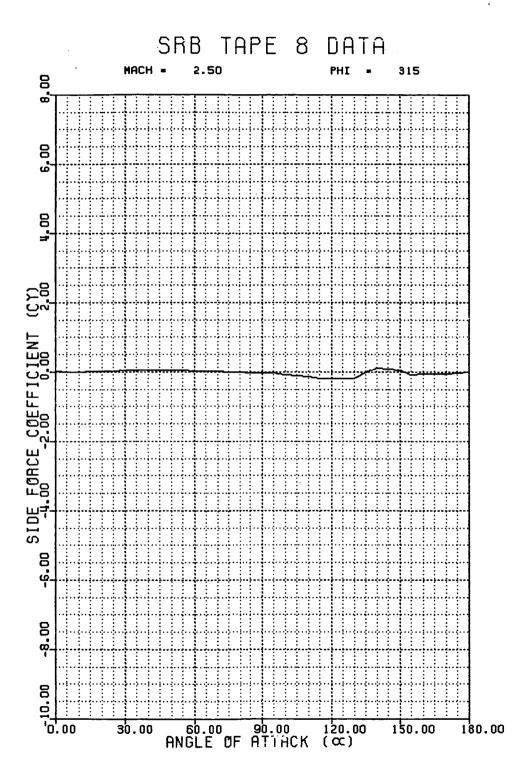
B-410
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-411
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

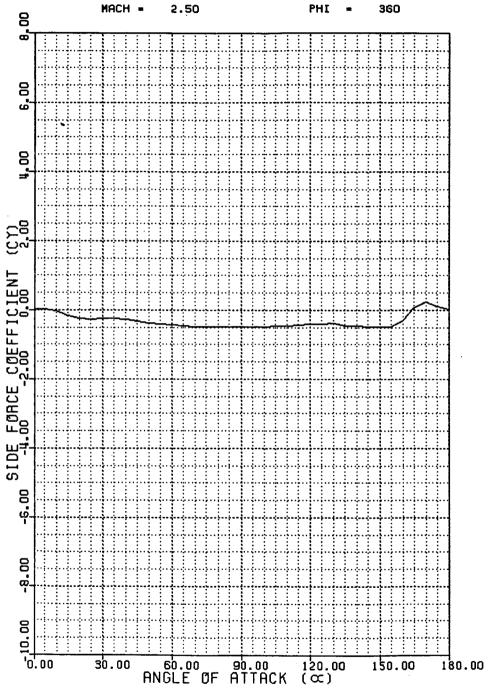


B-412
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



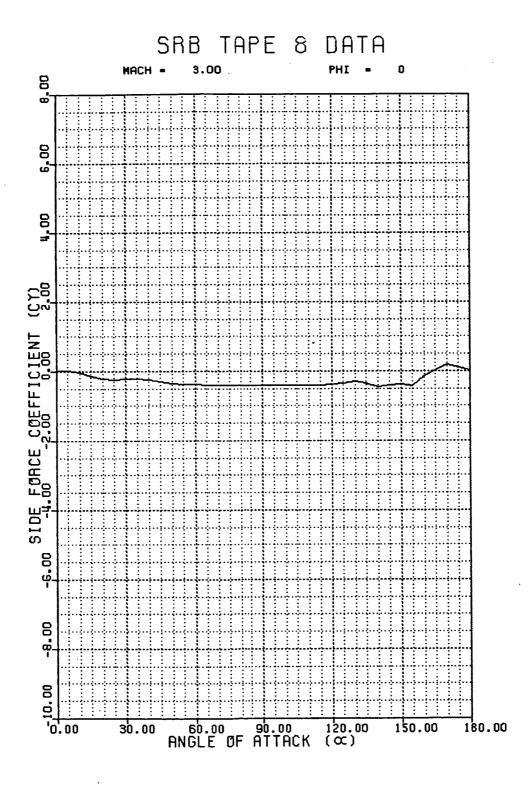
B-413
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA - 2.50 PHI -

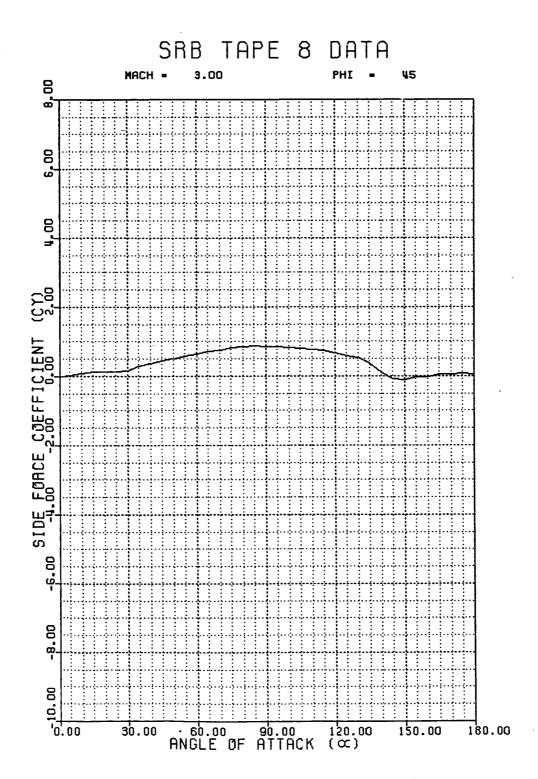


B-414

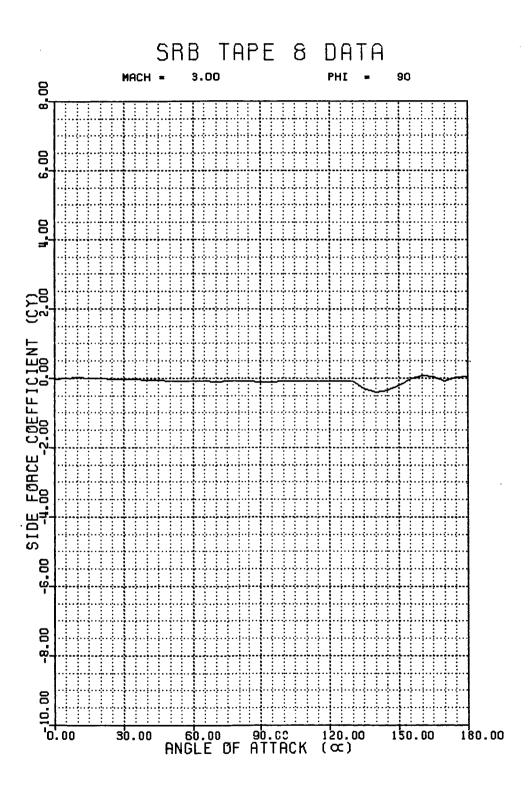
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



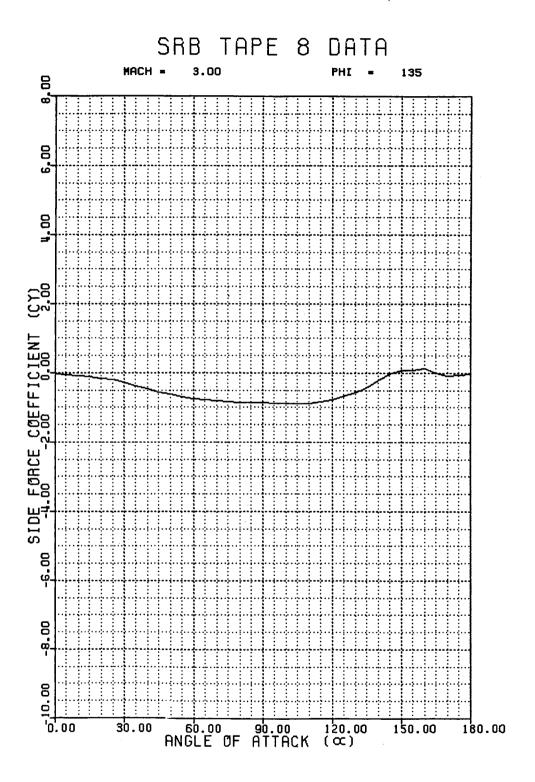
B-415
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



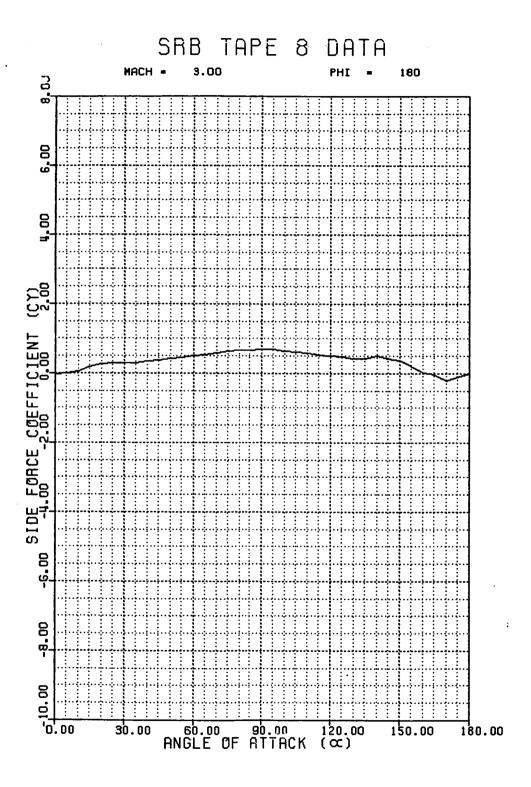
B-416
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



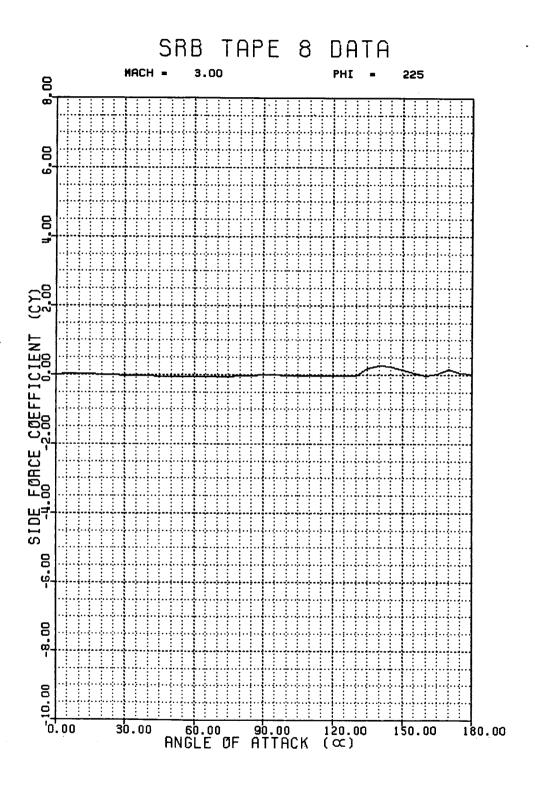
B-417
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



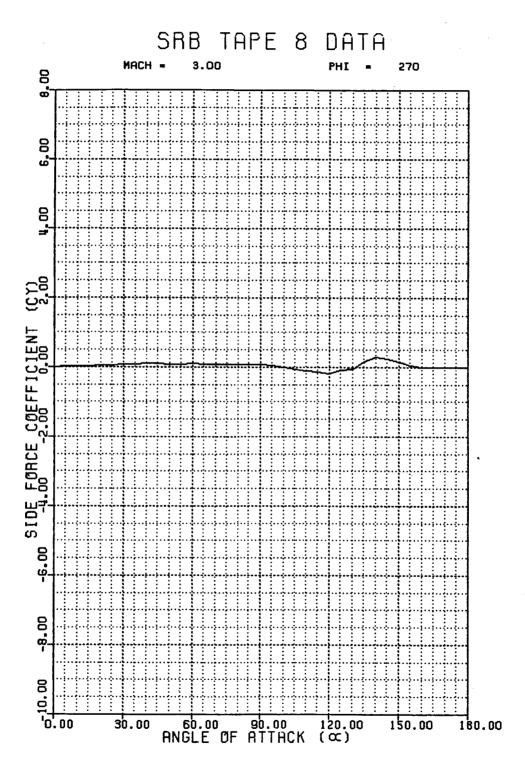
B-418
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-419

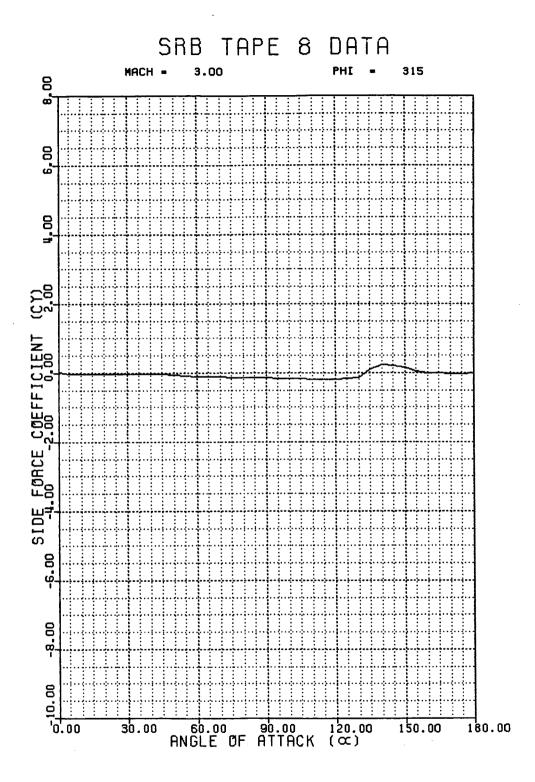


B-420
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

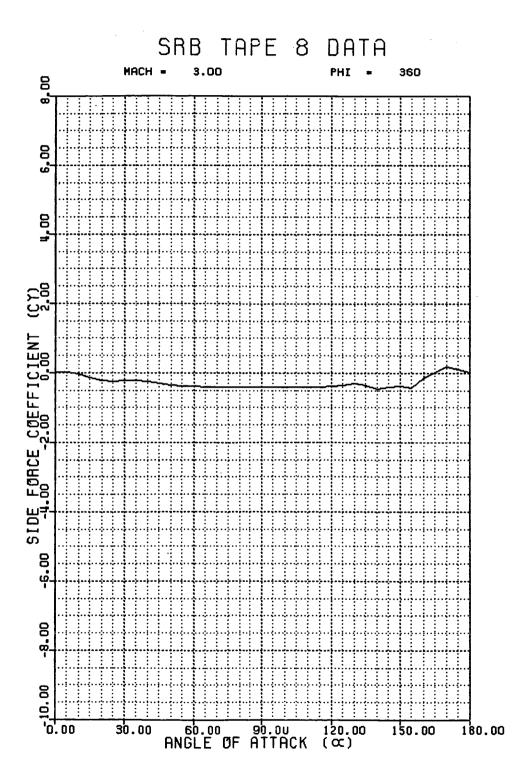


B-421

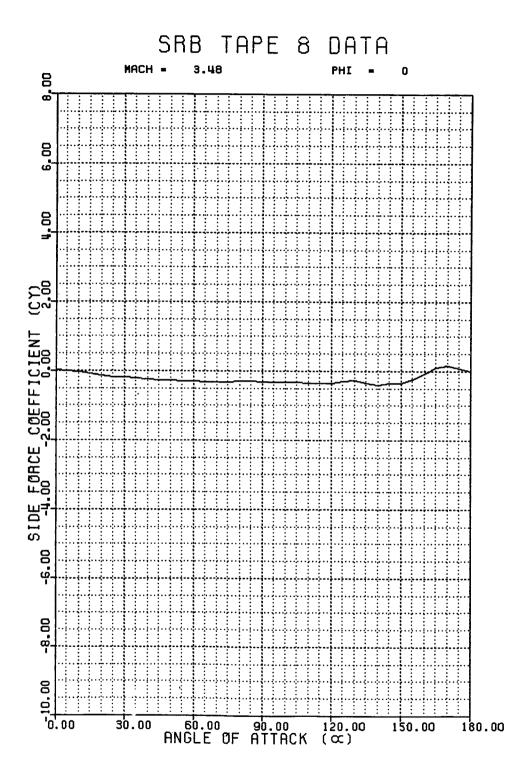
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



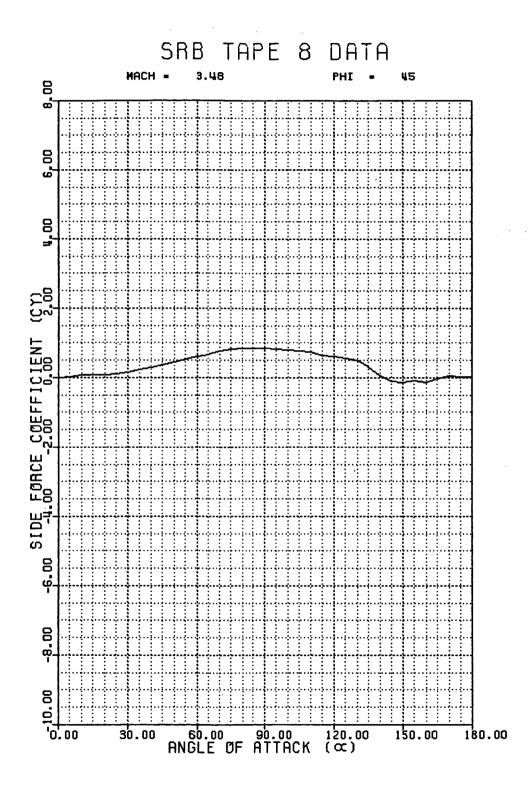
B-422
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



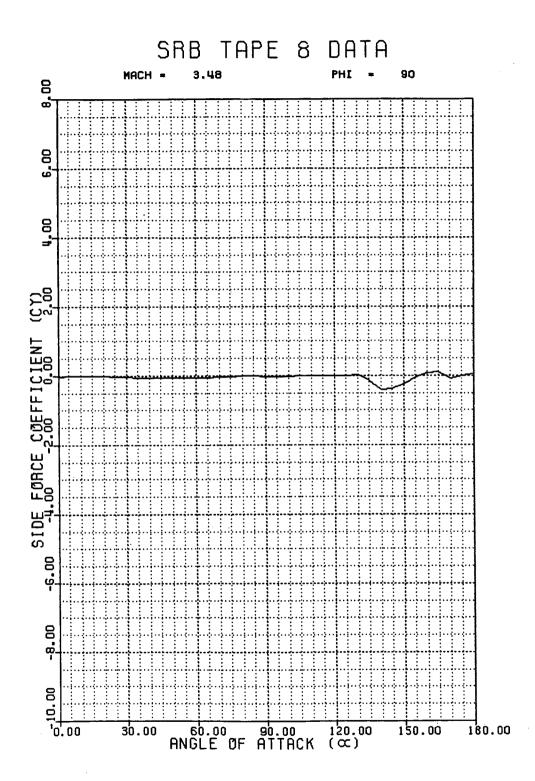
B-423



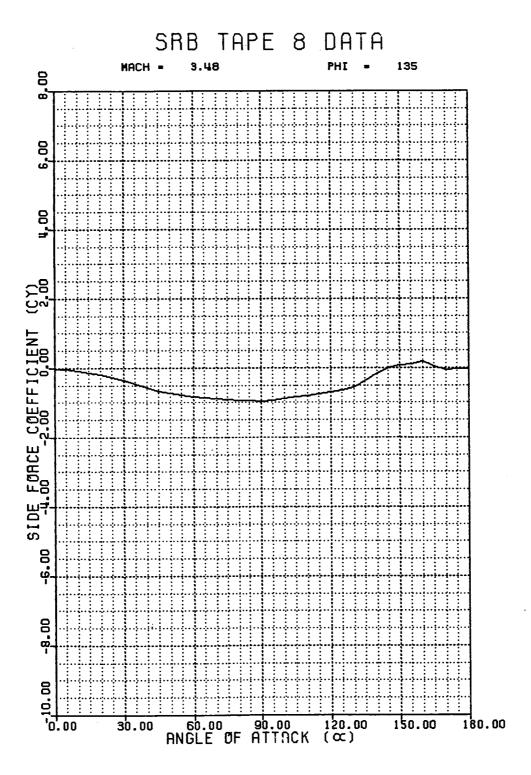
B-424
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-425

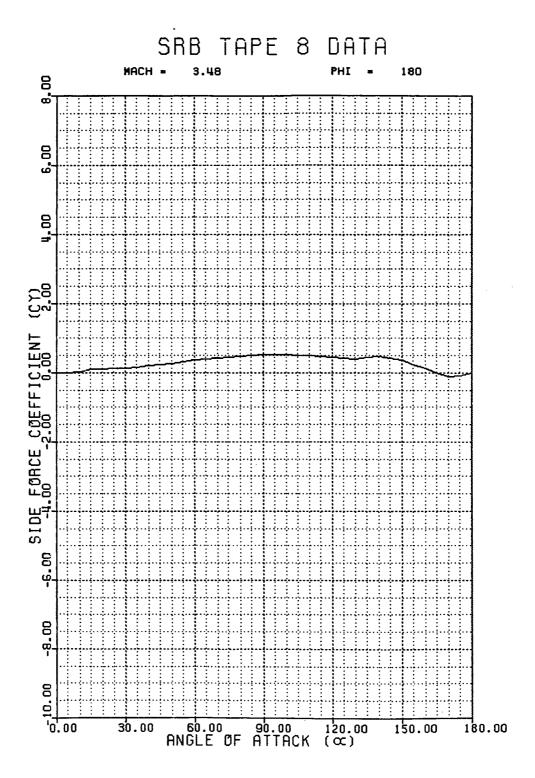


B-426
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-427

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

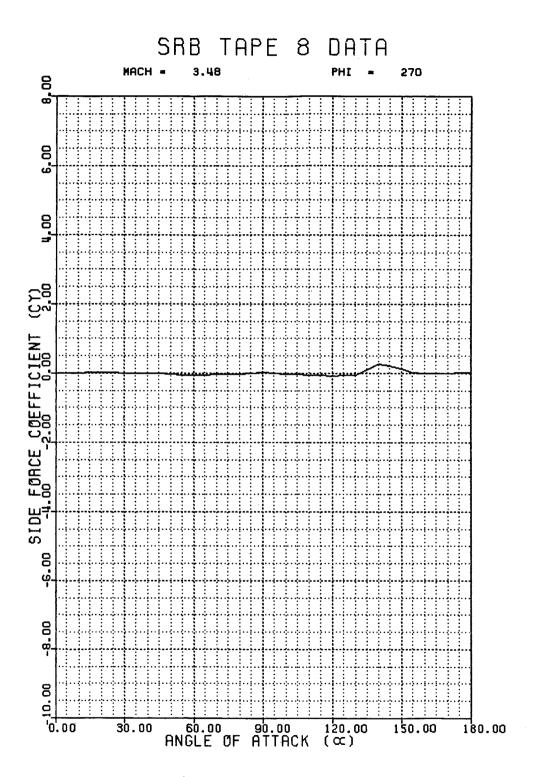


B-428

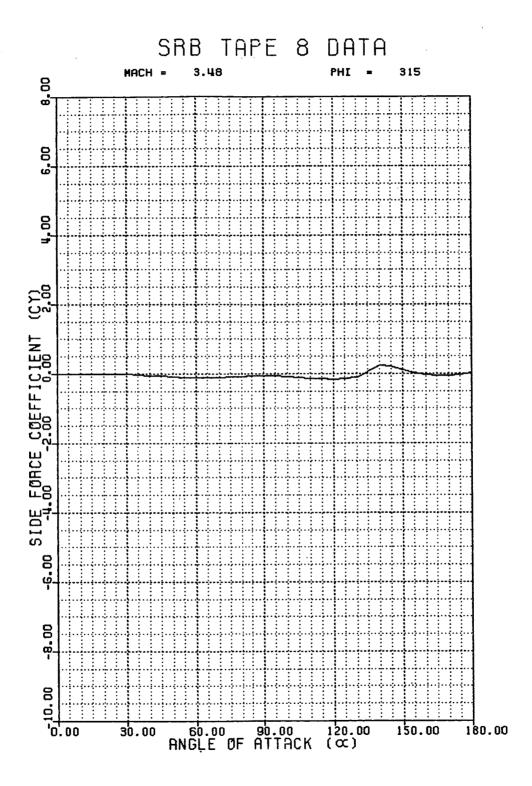
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 225 9.00 6.00 u, 00 SIDE FORCE COEFFICIENT -6.00 -8.00 0.00 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 150.00 180.00 30.00

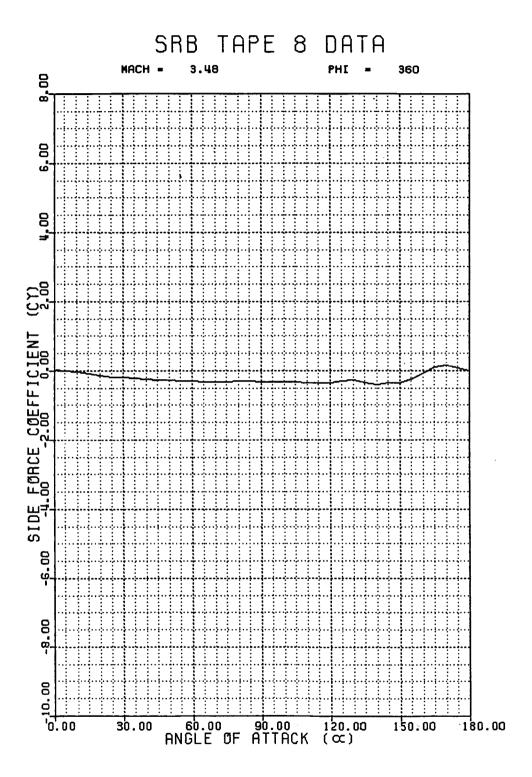
B-429



B-430
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



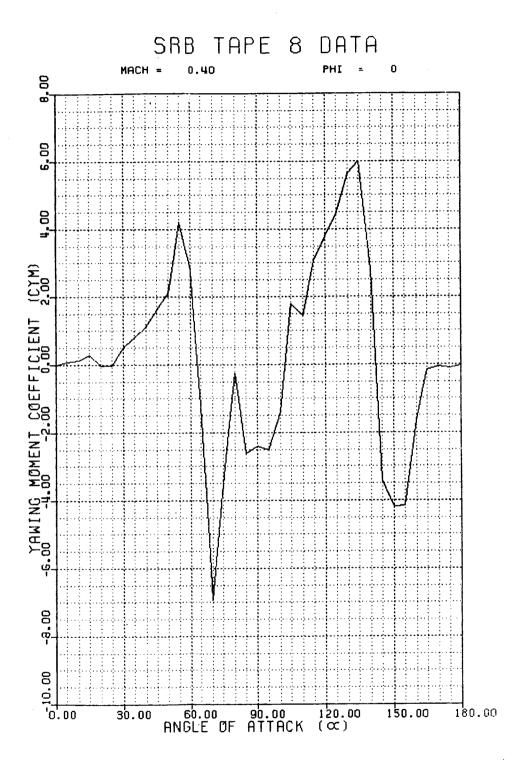
B-431
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



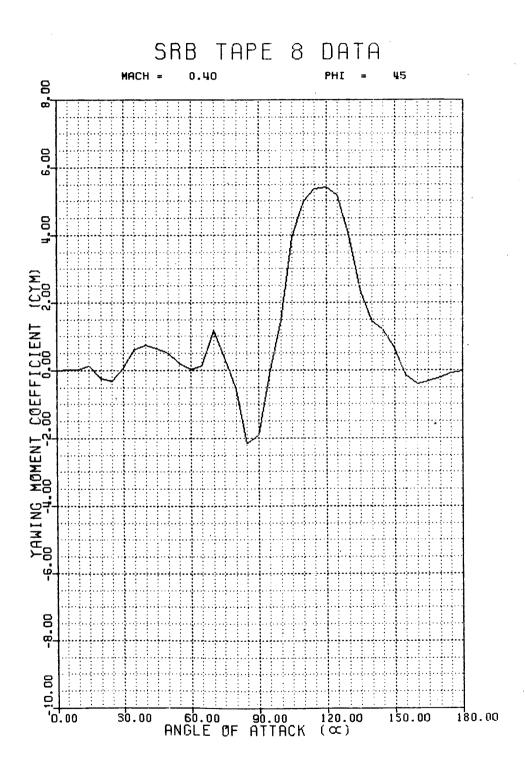
B-432
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

YAWING MOMENT (CYM)

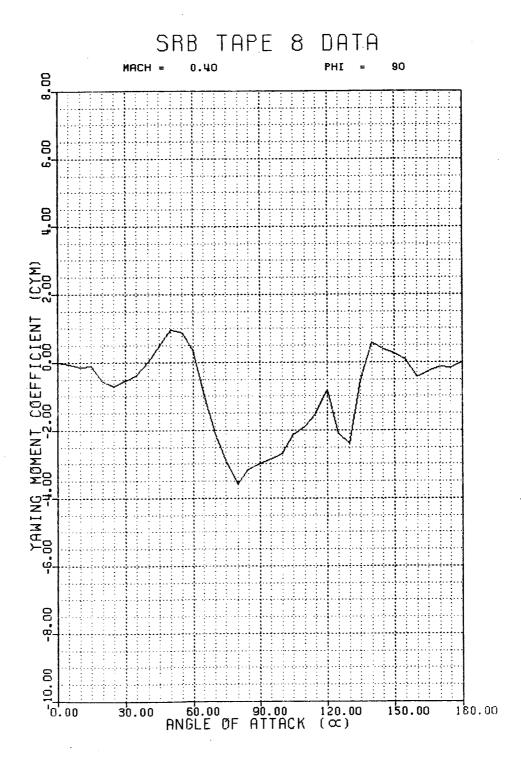
Mach Number	Page
0.4	B-433
0.5	B-442
0.55	B-451
0.6	B-460
0.7	B-469
0.8	B-478
0.9	B-487
0.95	B-496
1.05	B-505
1.1	B-514
1.2	B-523
1.4	B-532
1.96	B-541
2.5	B-550
3.0	B-559
3.48	B-568



B-433
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-434 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

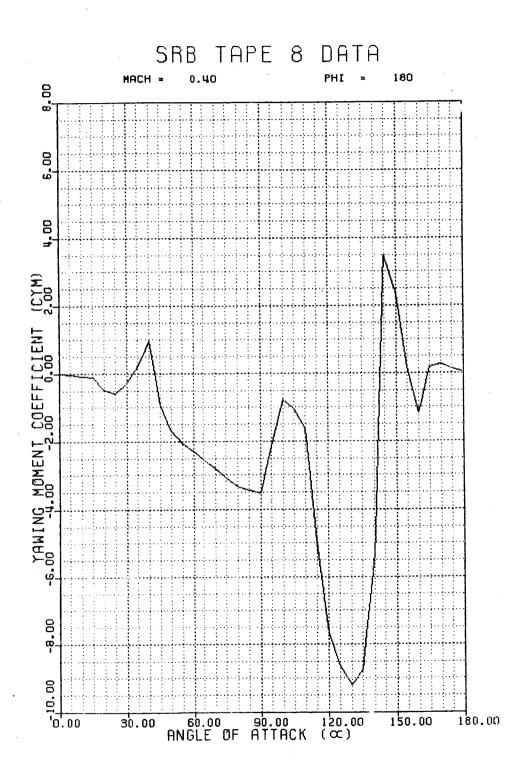


B-435
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

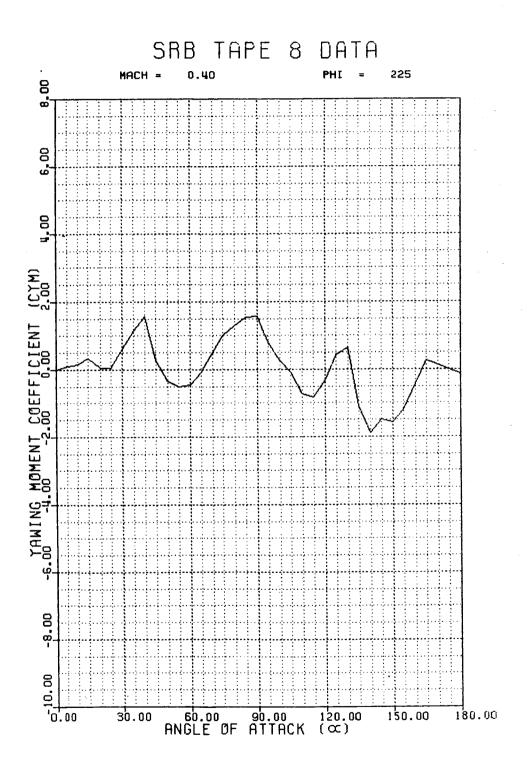
SRB TAPE 8 DATA 135 8.00 6,00 u. 00 YAWING MOMENT COEFFICIENT (CYM) -8·00 00.00 60.00 90.00 ANGLE OF ATTACK 120.00 (∝) 150.00 180.00 30.00

B-436 .

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

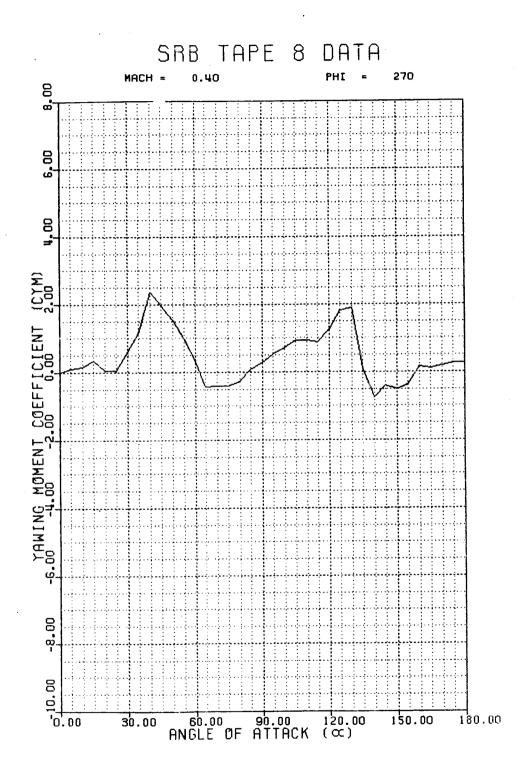


B-437
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

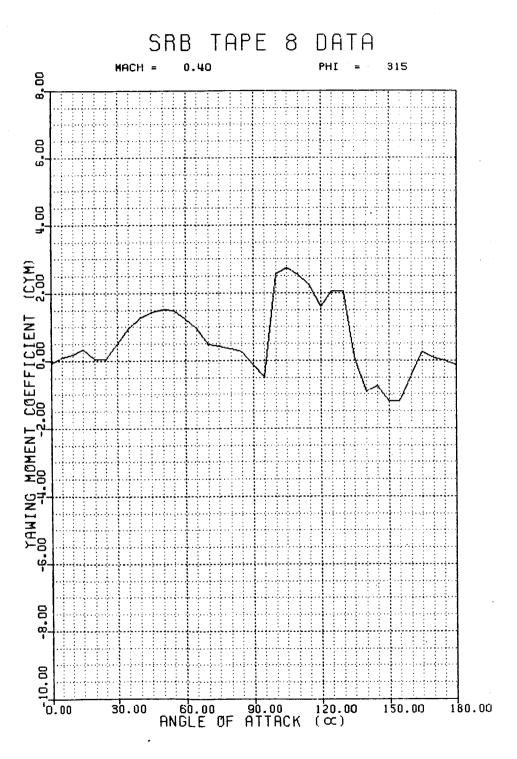


B-438

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

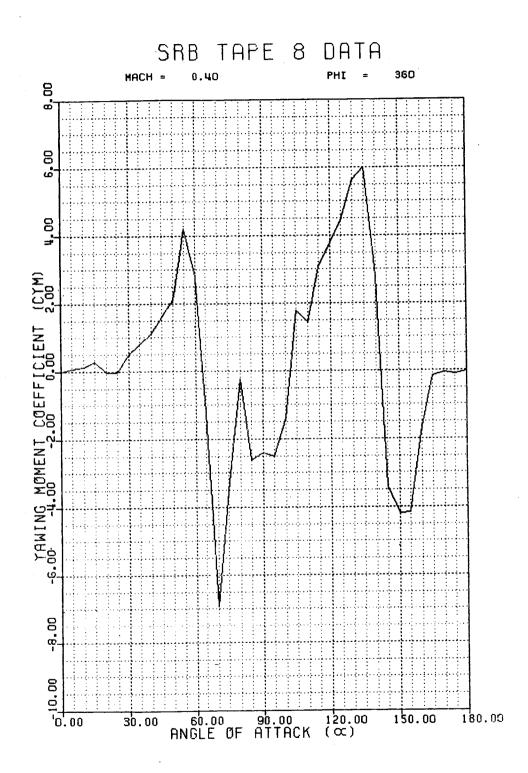


B-439
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

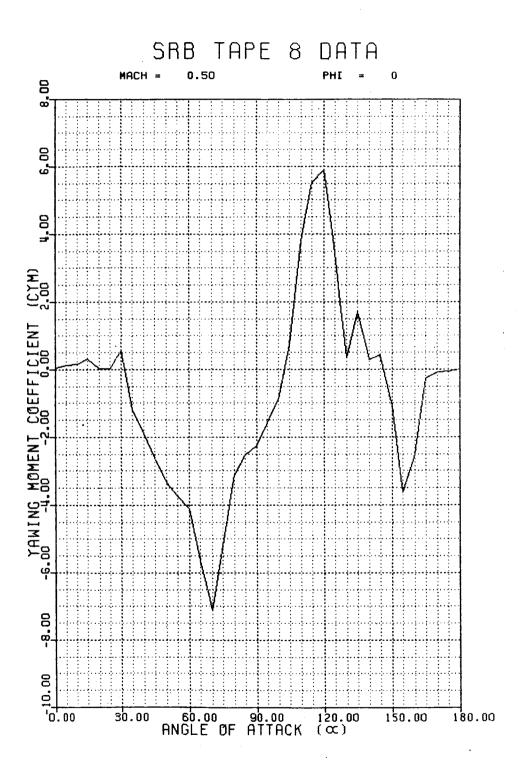


B-440

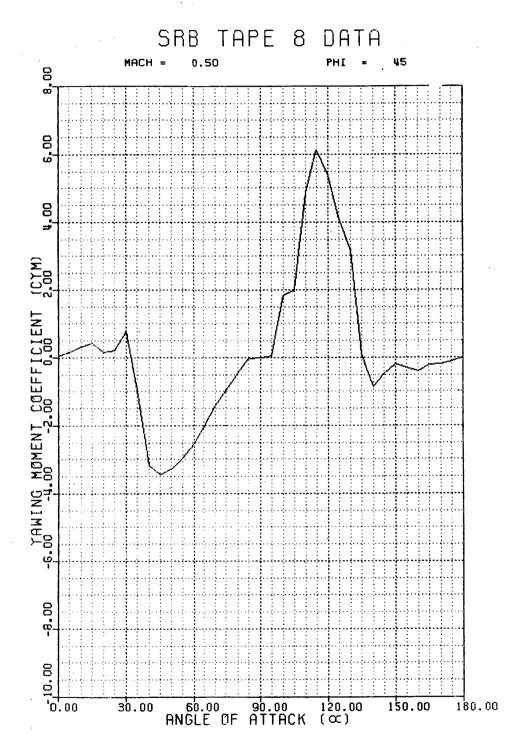
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-441
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

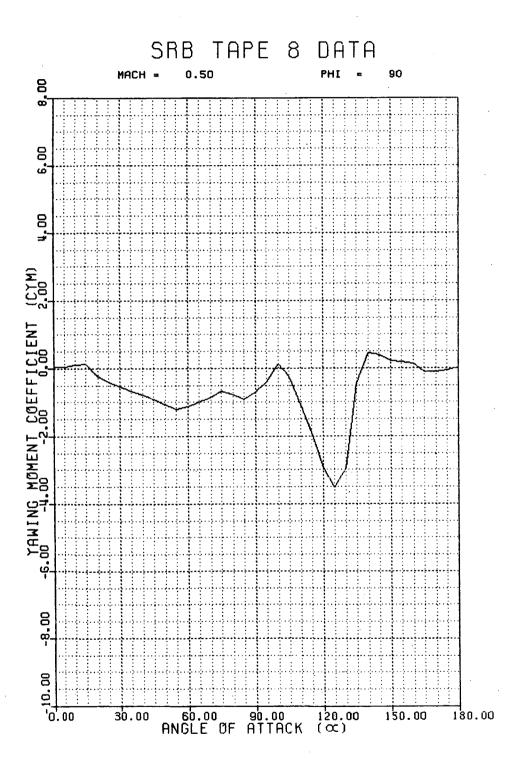


B-442
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

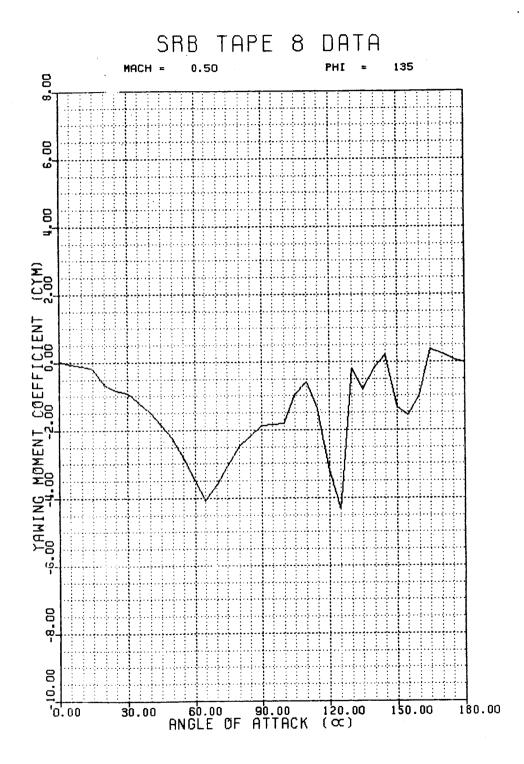


B-443

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

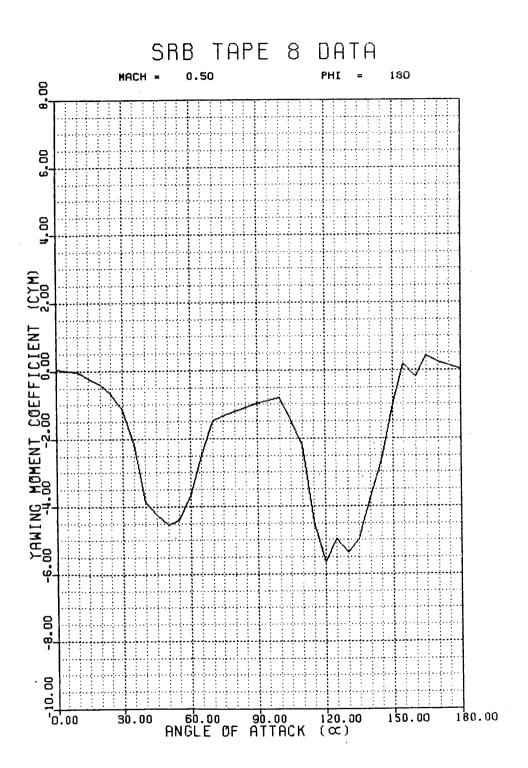


B-444
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



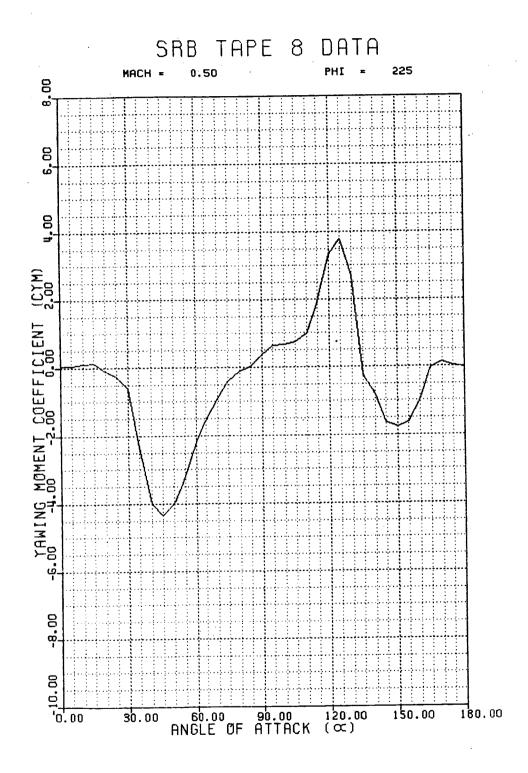
B-445

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

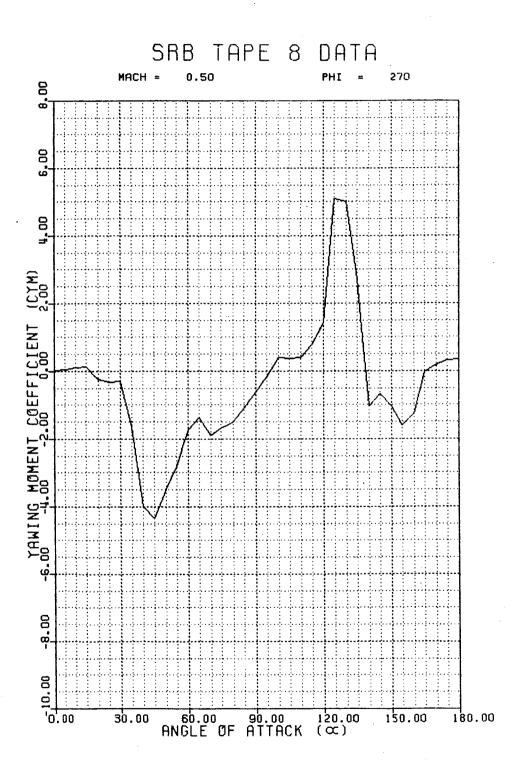


B-446

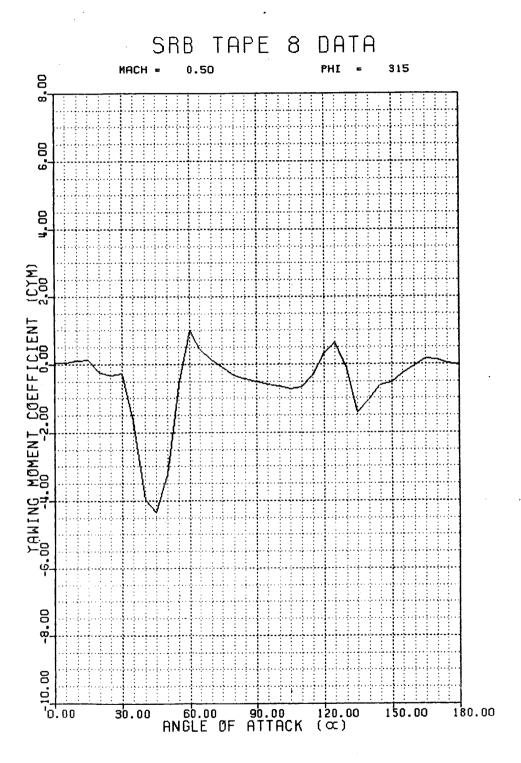
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-447
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

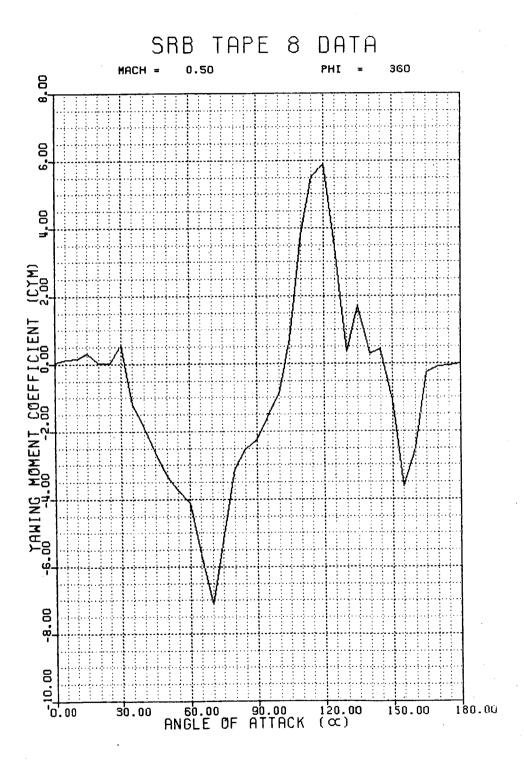


B-448
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

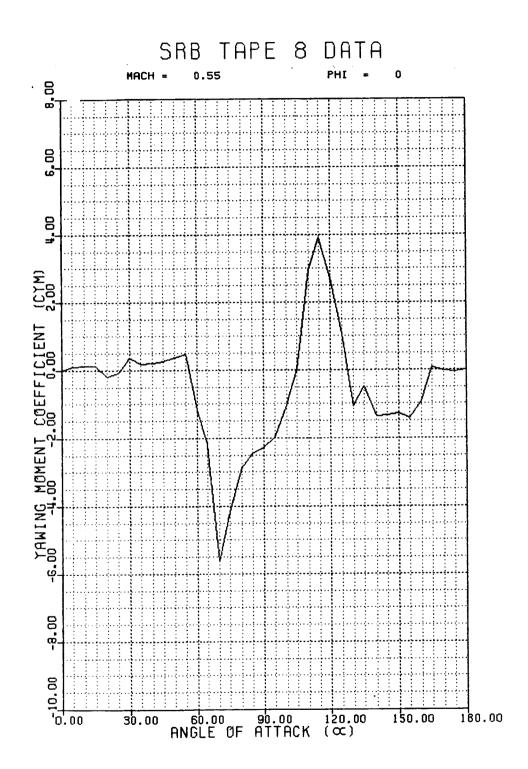


B-449

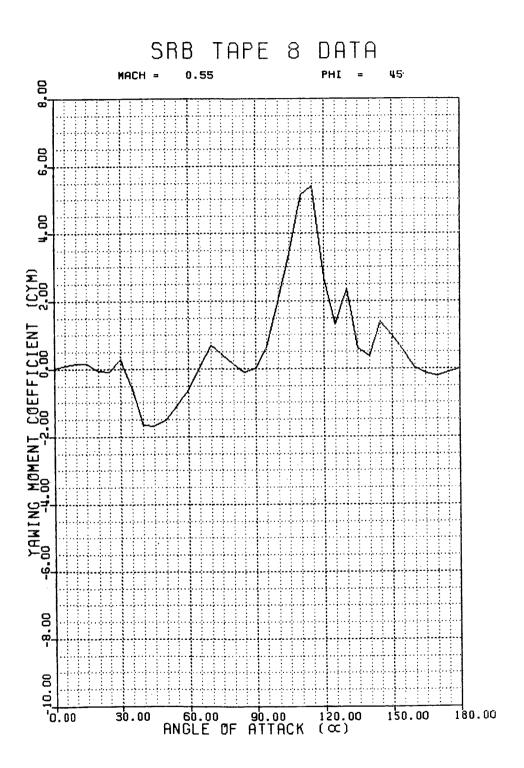
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



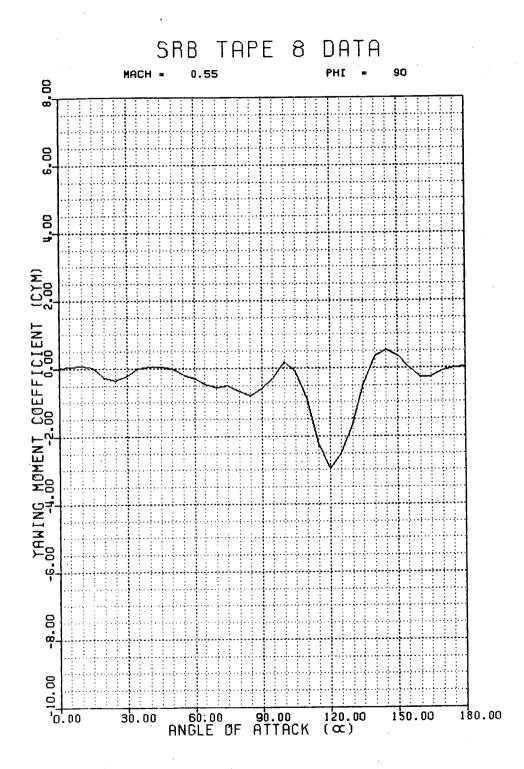
B-450
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-451
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

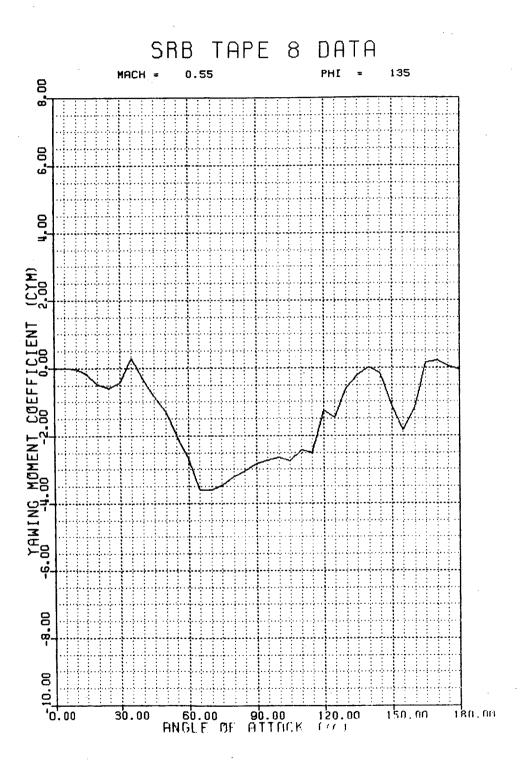


B-452
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-453

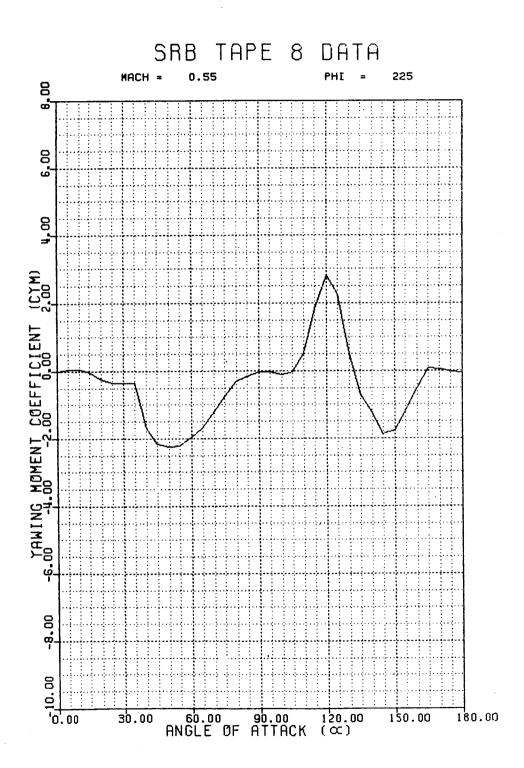
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



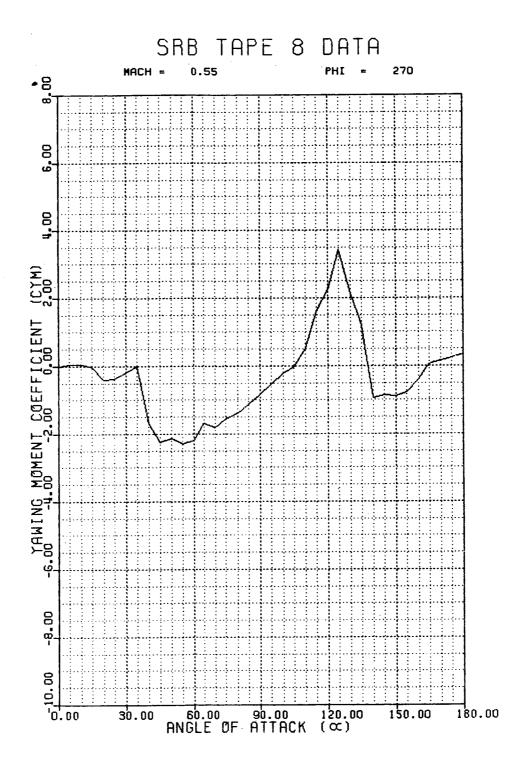
B-454
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA MACH = 180 **6.** 00 00 ° YAMING MOMENT COEFFICIENT (CYM) 9.00 0.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 30.00 150.00 180.00

B-455
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

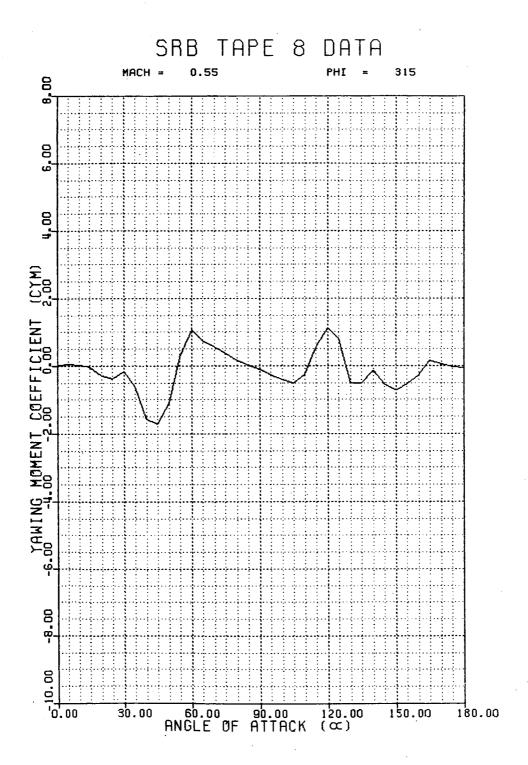


B-456
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

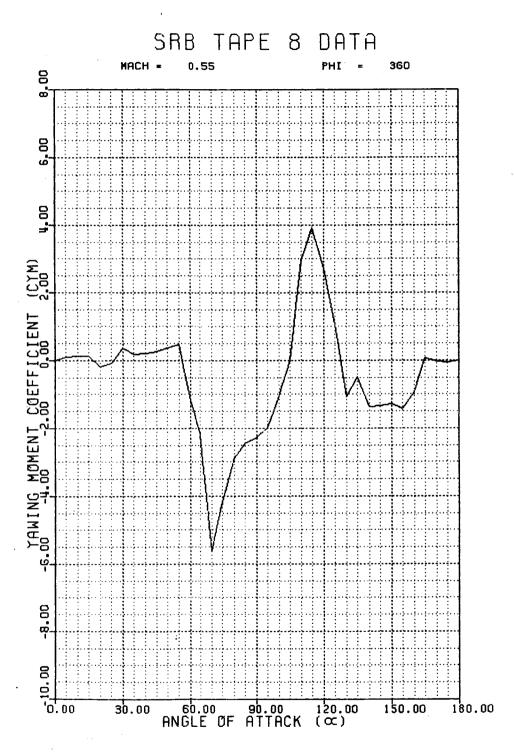


B-457

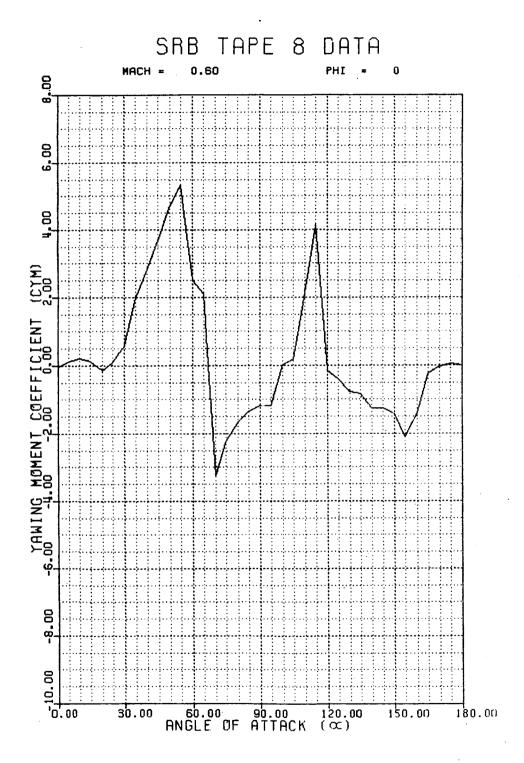
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-458



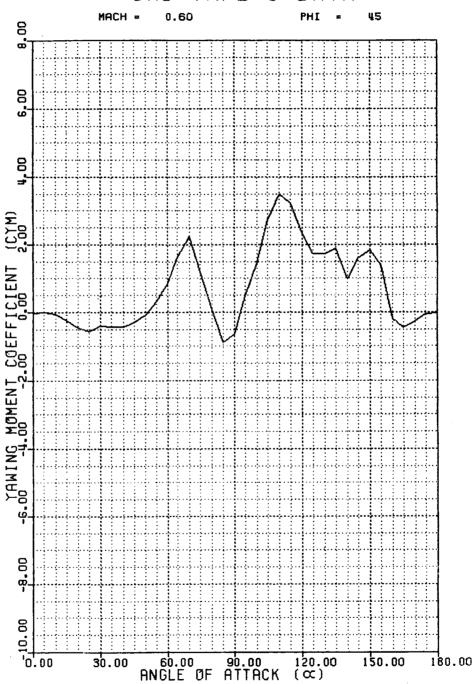
B-459
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



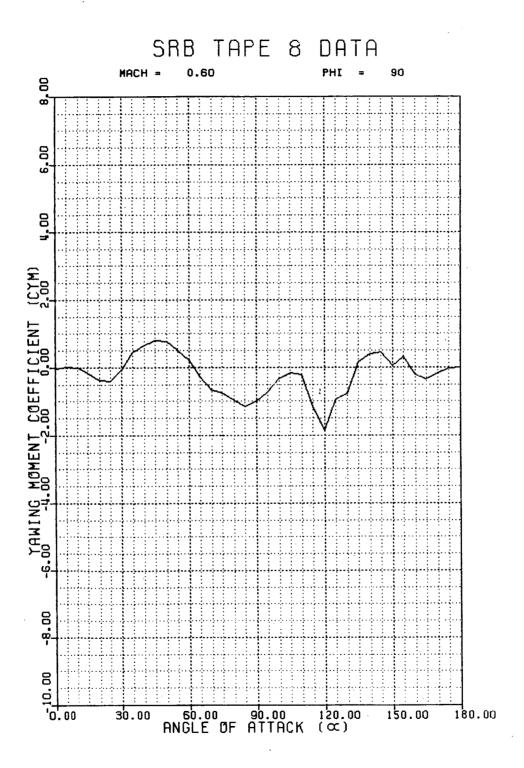
B-460

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

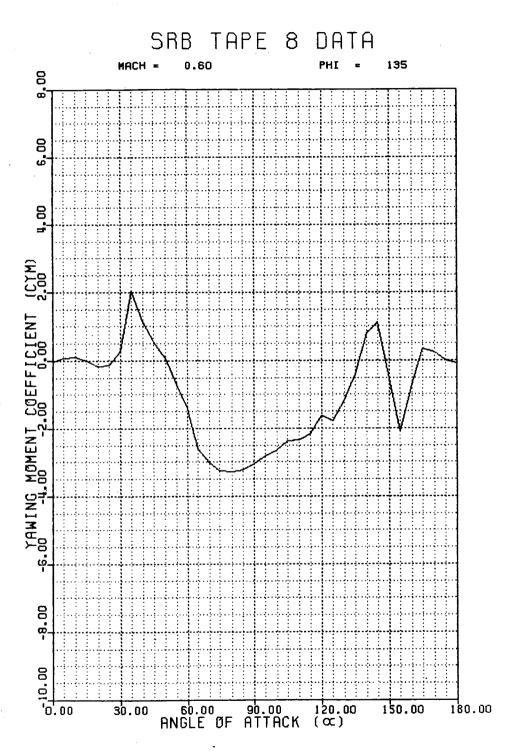
LMSC-HREC TR D951500-1B



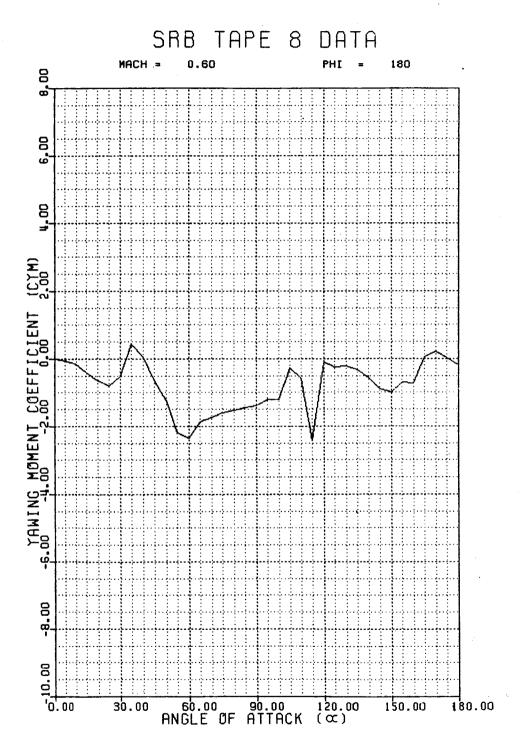
B-461



B-462
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

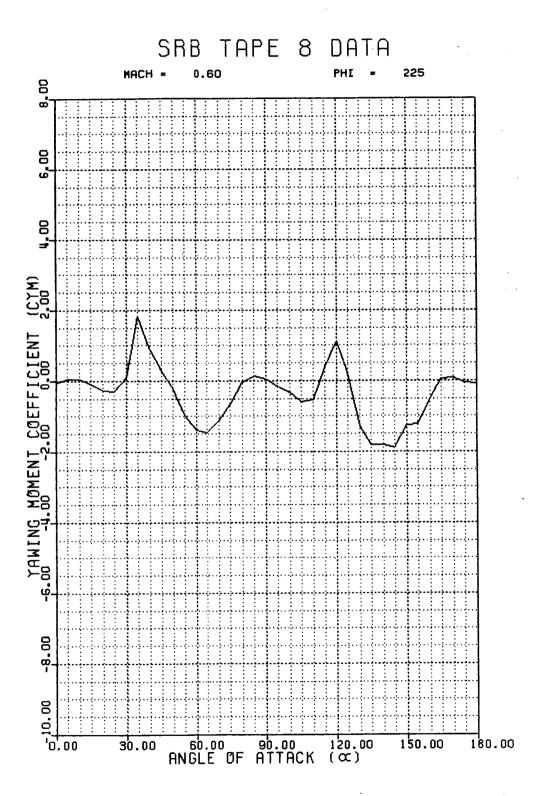


B-463
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

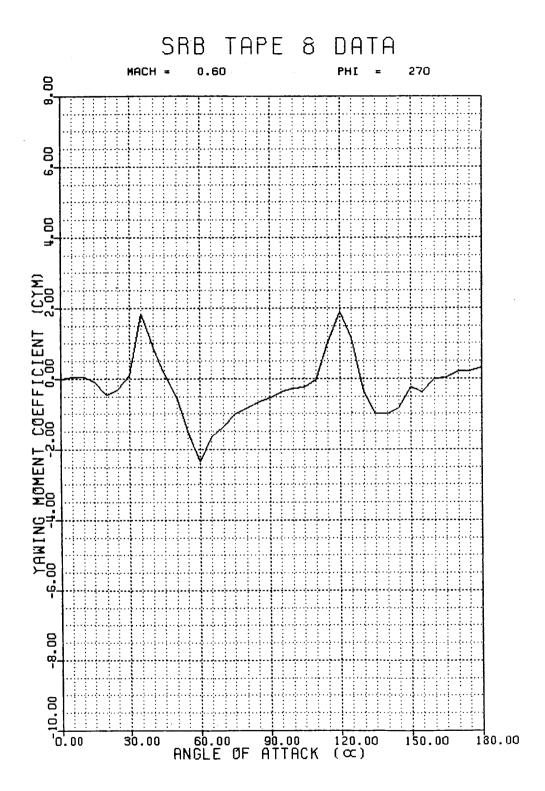


B-464

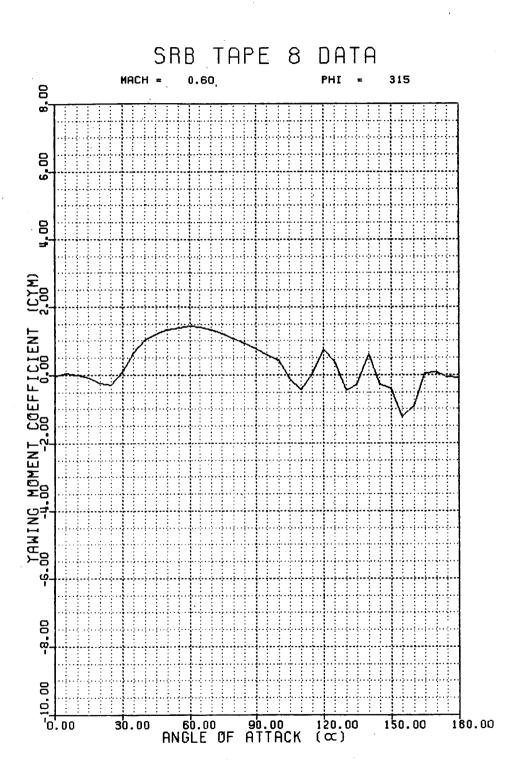
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-465



B-466
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-467

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-468

SRB TAPE 8 0.70 MACH = 8.00 6.00 4,00 YAWING MOMENT COEFFICIENT (CYM) -8-00 00.00 30.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

B-469

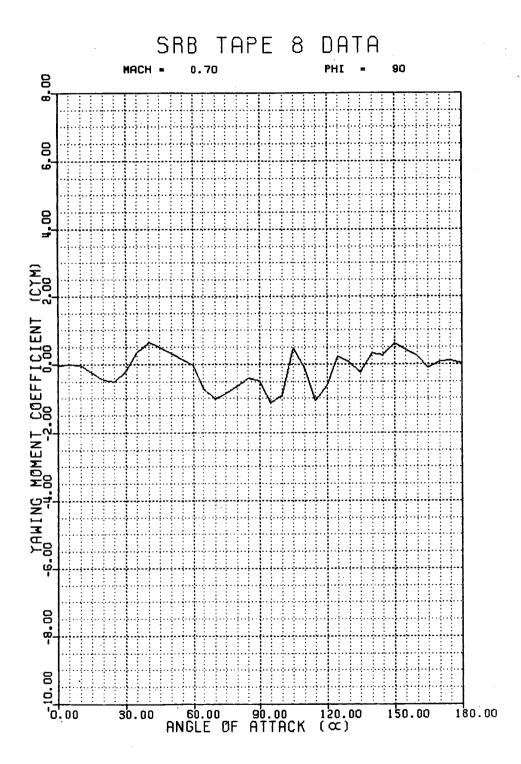
SRB TAPE 8 DATA MACH = 45 6,00 m .00 YAWING MOMENT COEFFICIENT (CYM) -8-00 00.00

B-470

60.00 90.00 ANGLE OF ATTACK

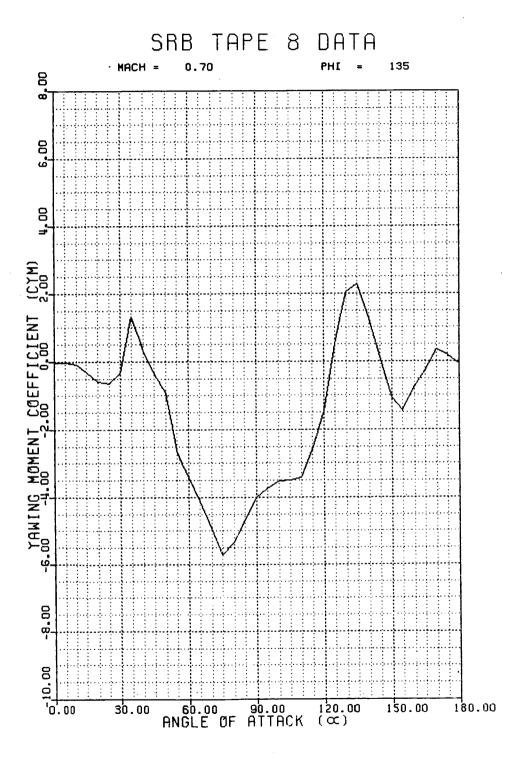
150.00

180.00

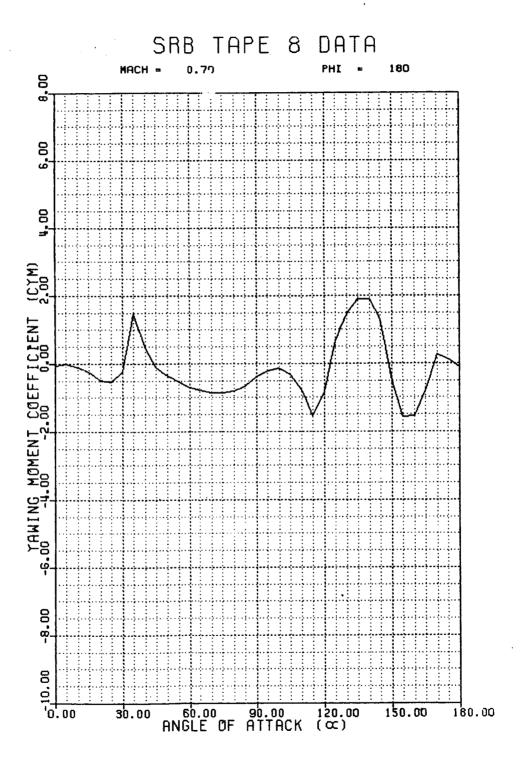


B-471

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

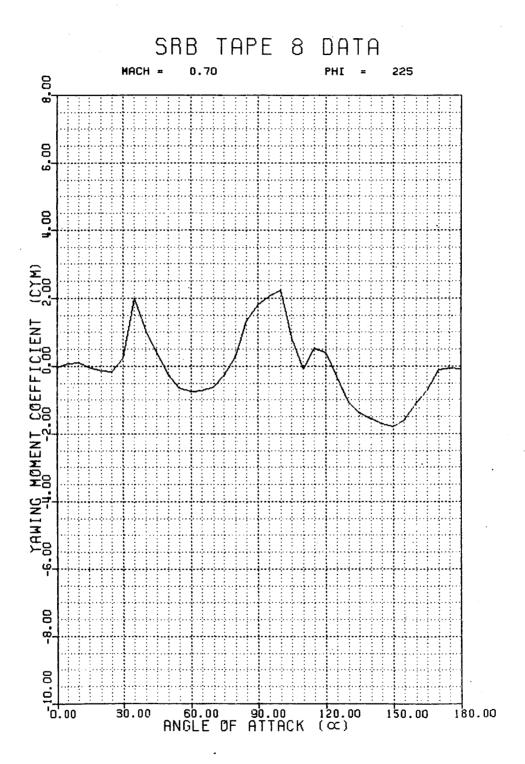


B-472
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

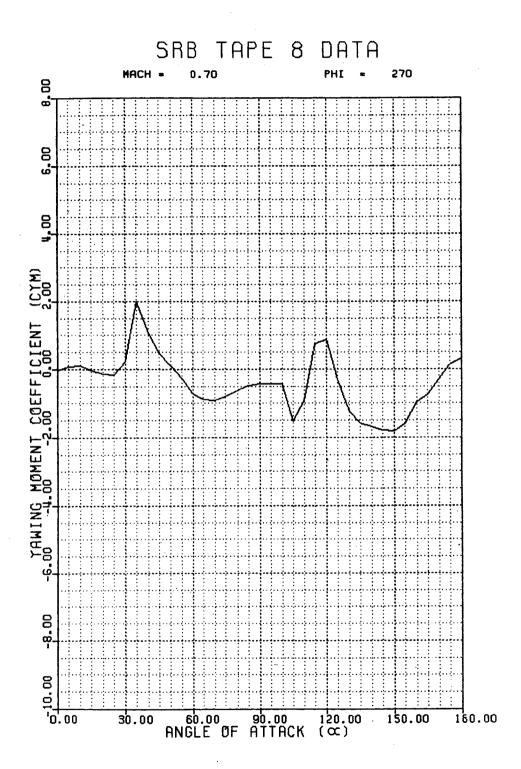


B-473

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

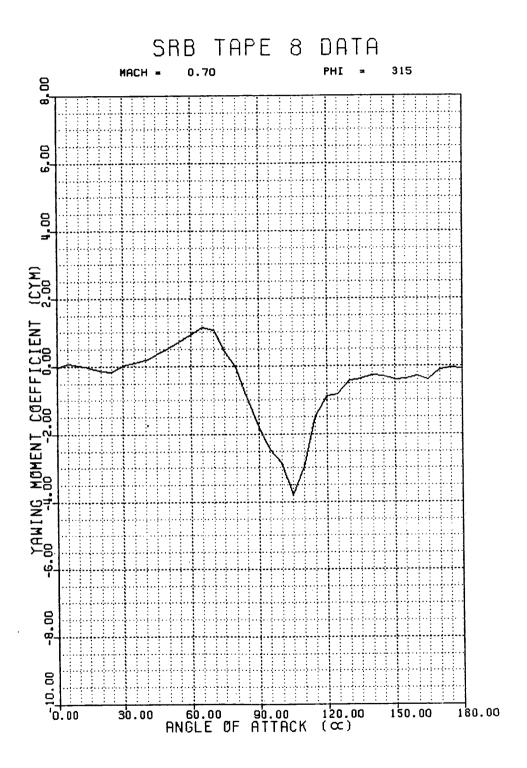


B-474
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

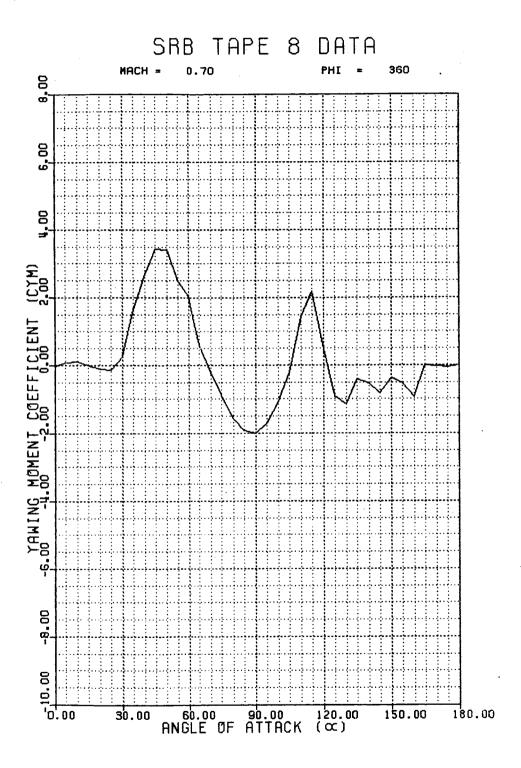


B-475

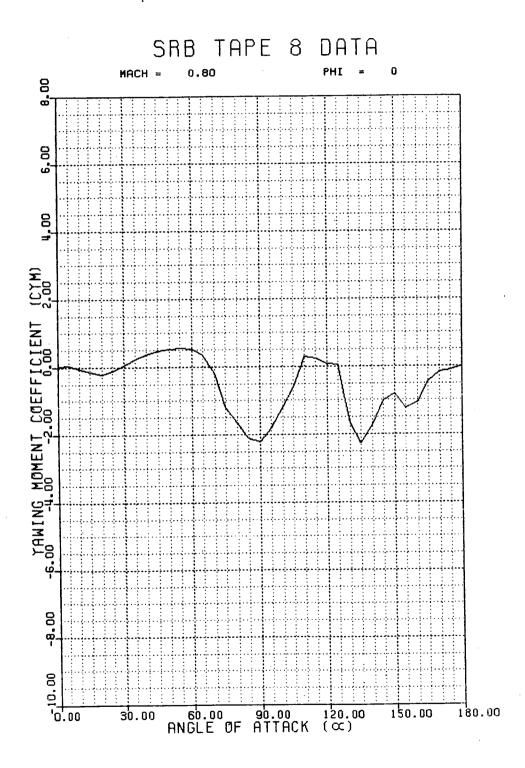
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



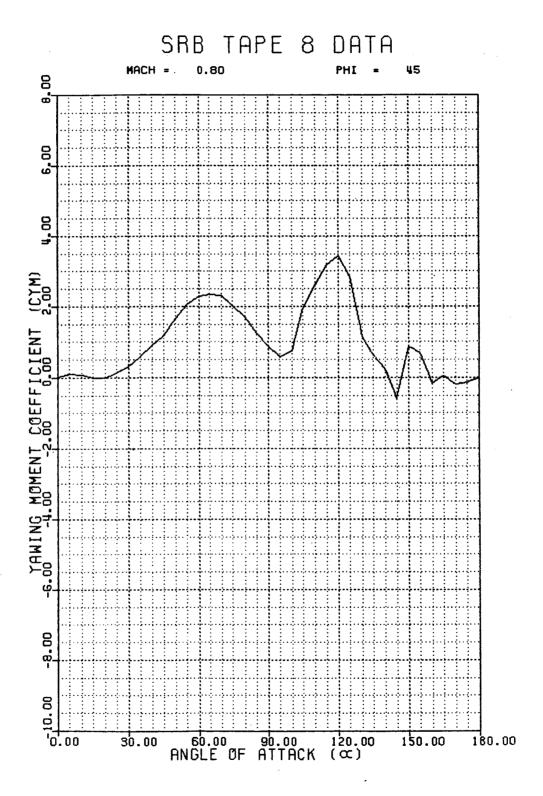
B-476
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



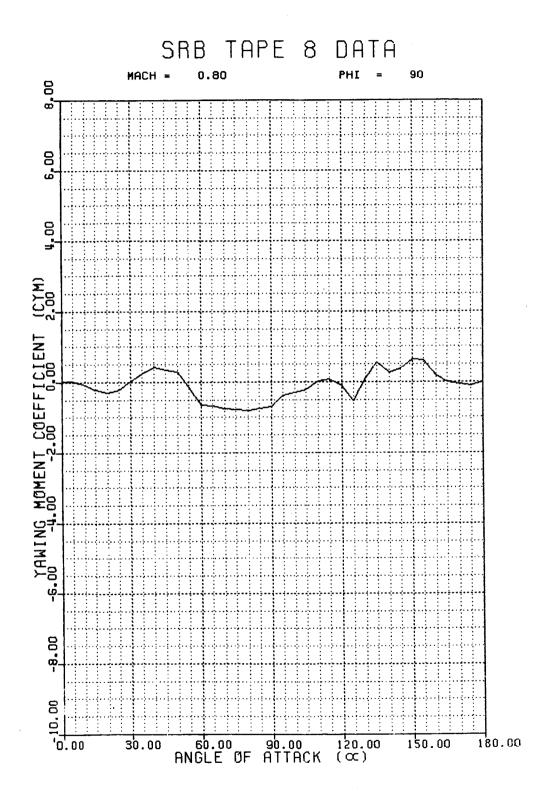
B-477
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-478

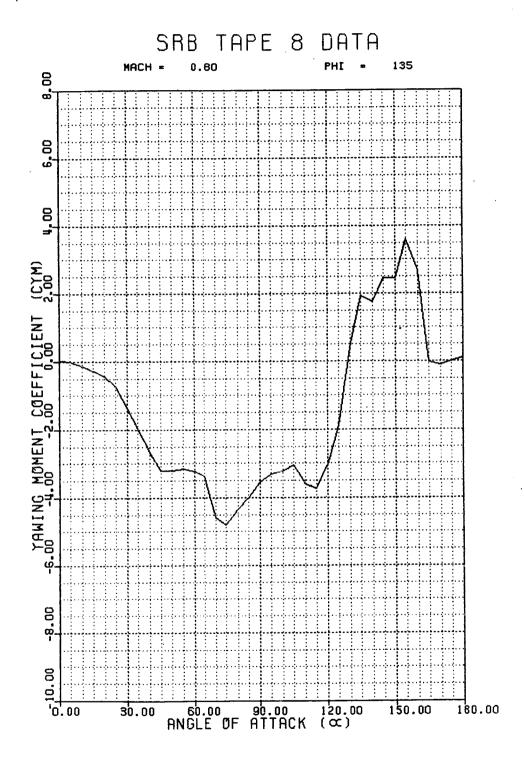


B-479



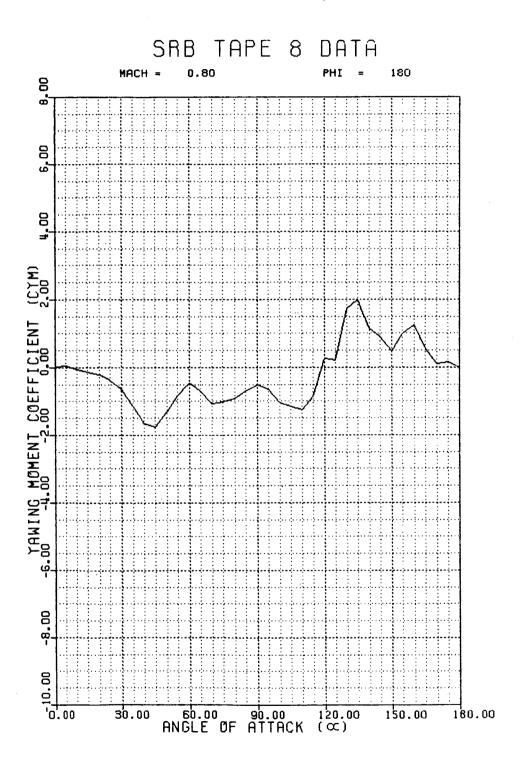
B-480

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



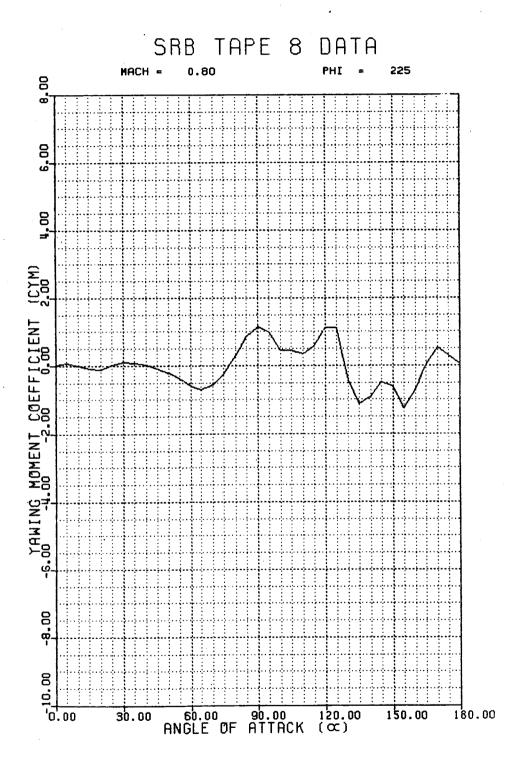
B-481

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

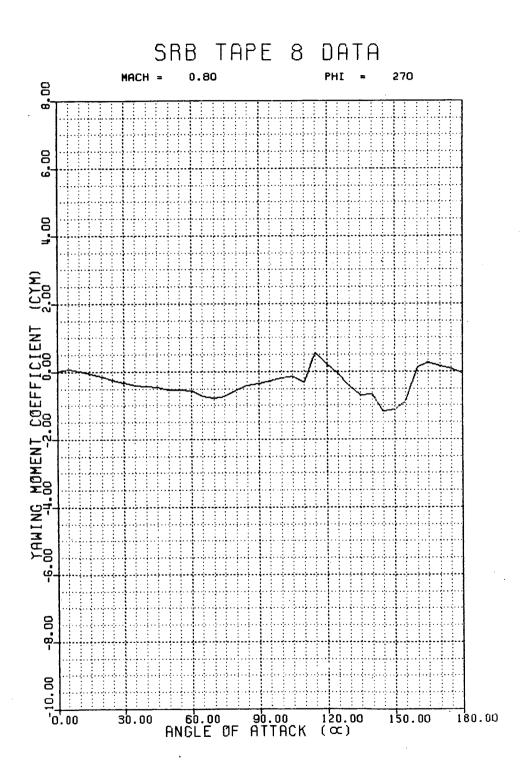


B-482

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



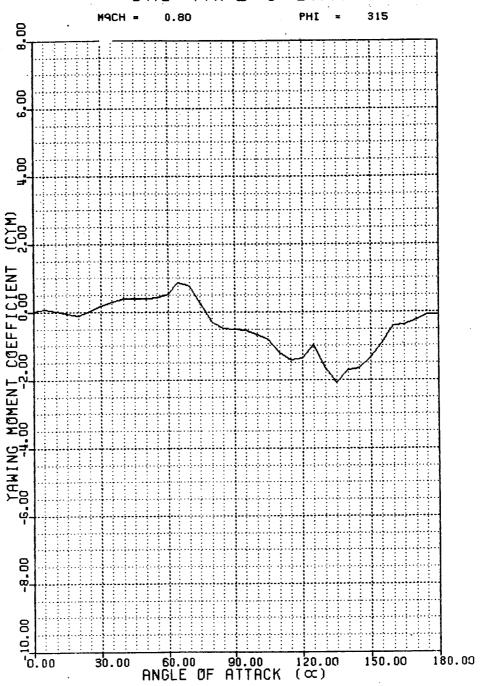
B-483
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-484

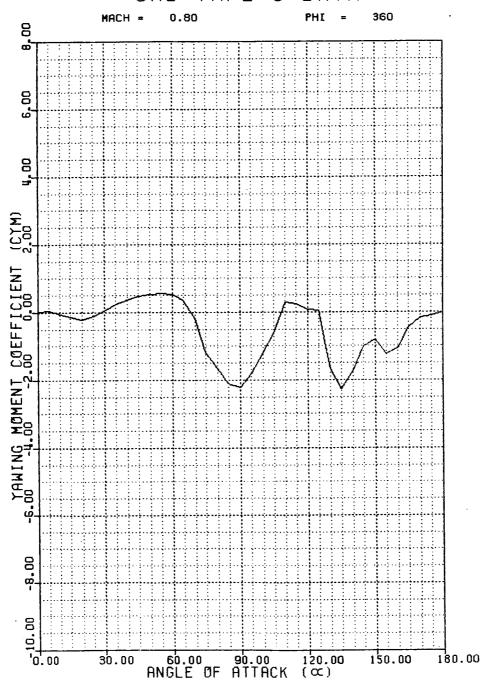
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

ORIGINAL PAGE IS OF POOR QUALITY

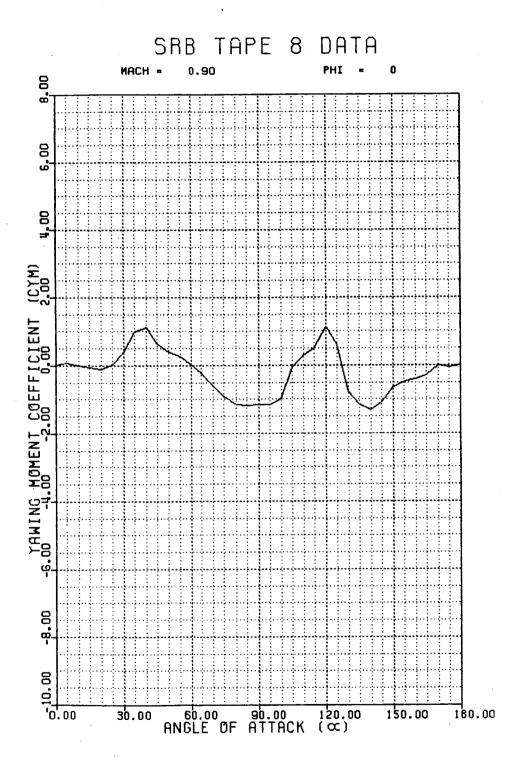


B-485

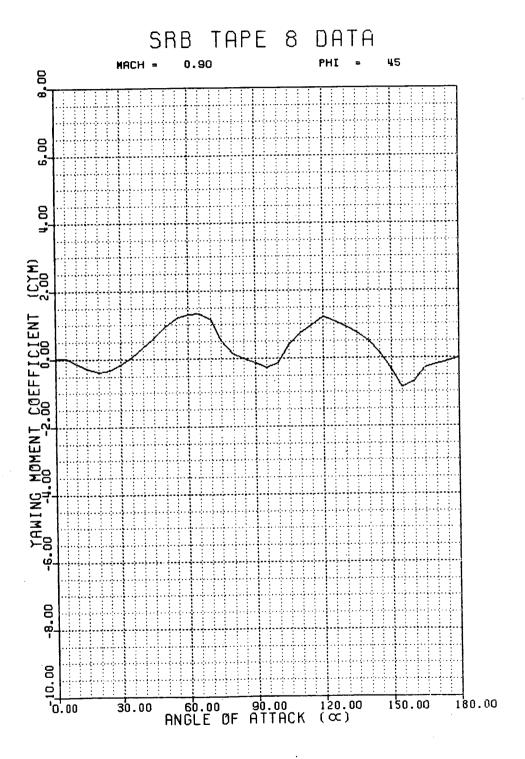
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-486



B-487
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

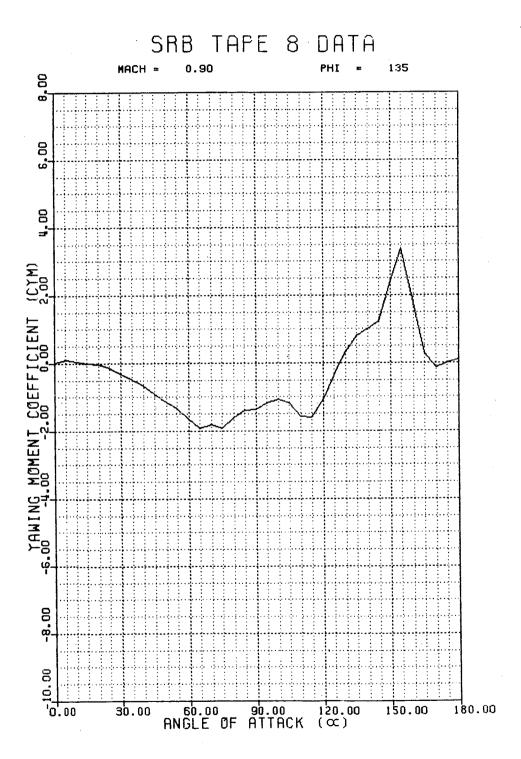


B-488
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 6.00 YAWING MOMENT COEFFICIENT -8-00 0.00 60.00 90.00 ANGLE OF ATTACK 150.00 180.00

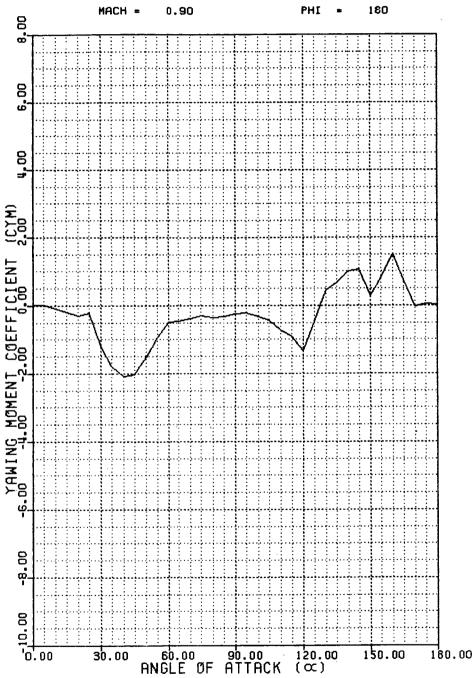
B-489

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

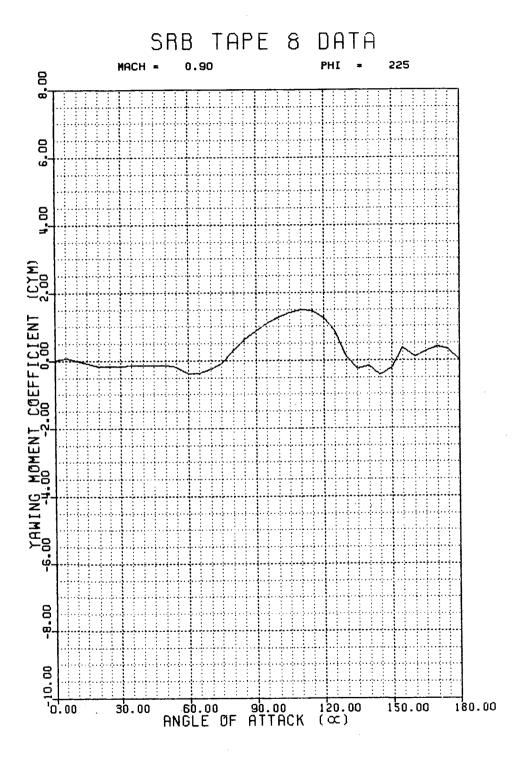


B-490

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



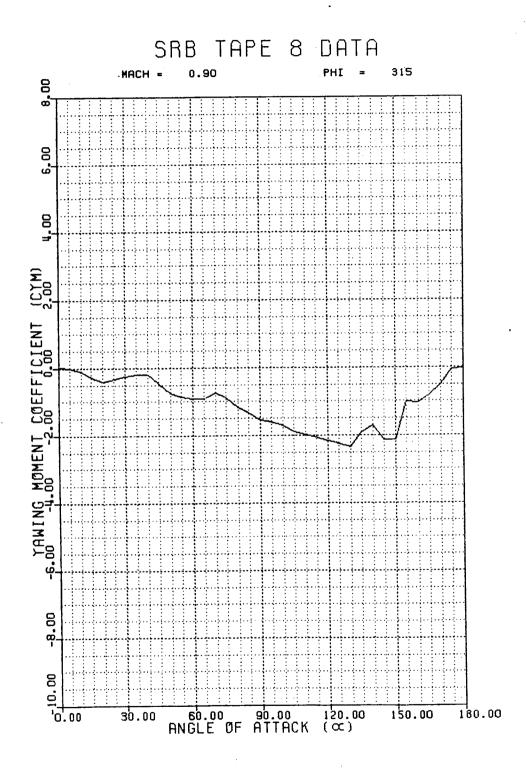
B-491



B-492
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

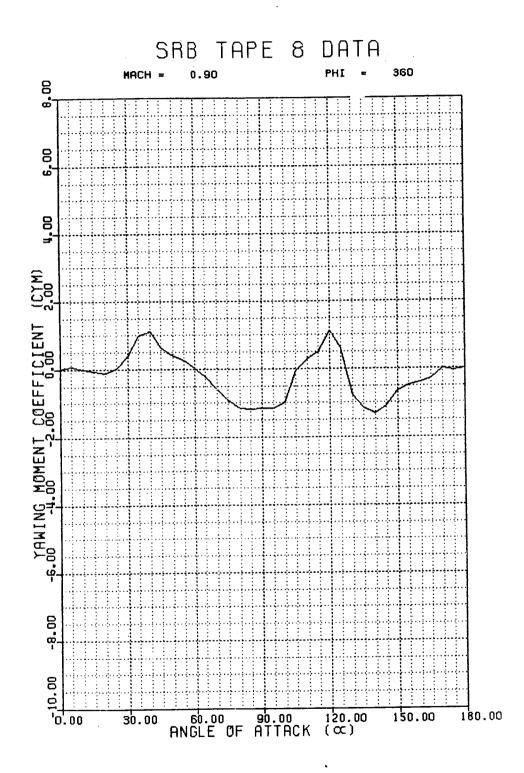
SRB TAPE 8 DATA 270 8,00 YAMING MOMENT COEFFICIENT -8.00 0.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00 30.00

B-493
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

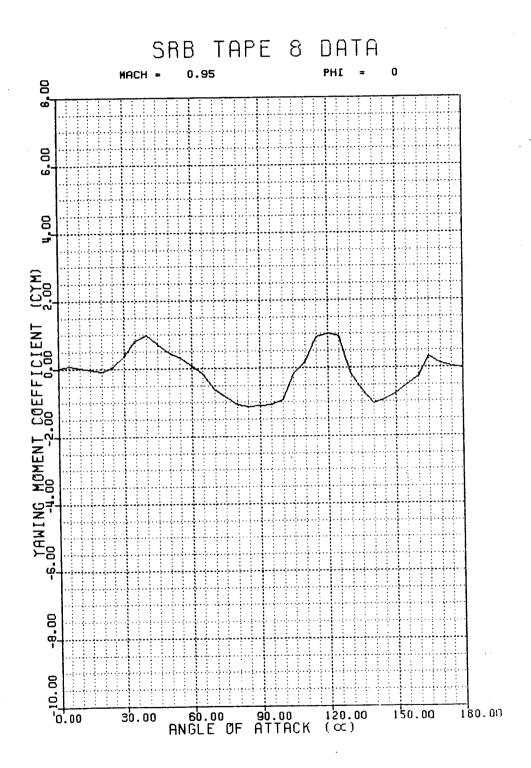


B-494

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

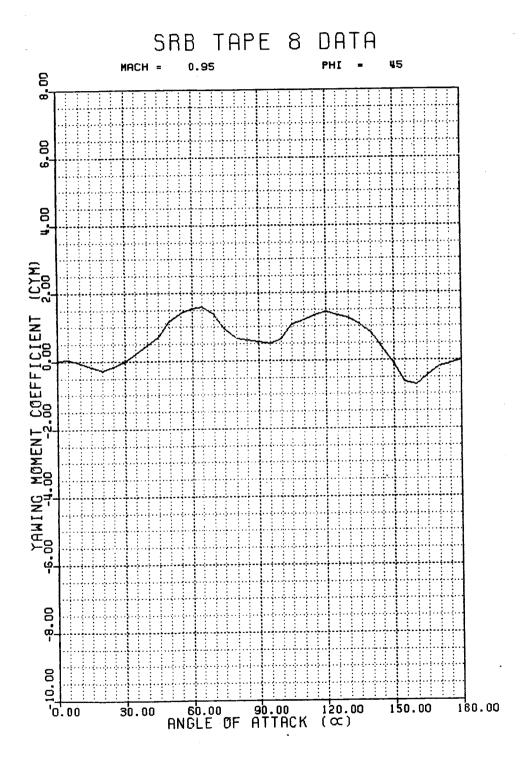


B-495
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-496

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-497
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 8,00 6<u>.</u> 00 YAWING MOMENT COEFFICIENT -8.00 0.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00 30.00

B-498

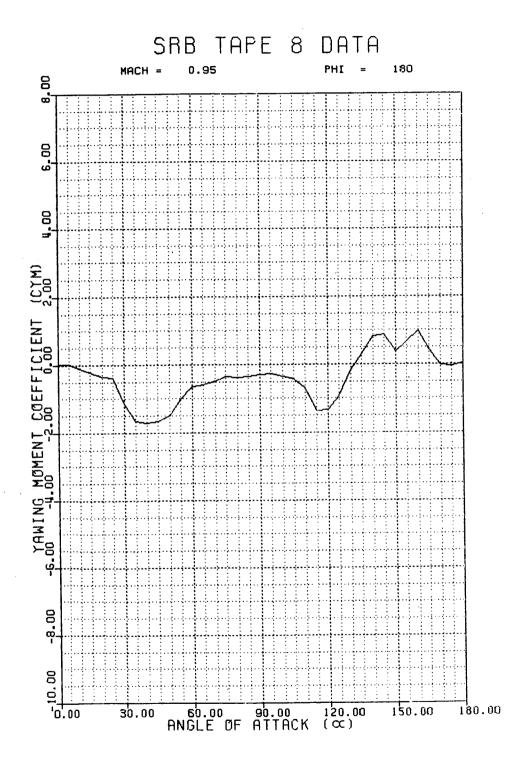
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

SRB TAPE 8 DATA 135 8,0 6.00 **1**,00 -S.00 -4.00 -2.00 OCFFICIENT (CYM) -8.00 00.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝)

B-499

150.00

180.00

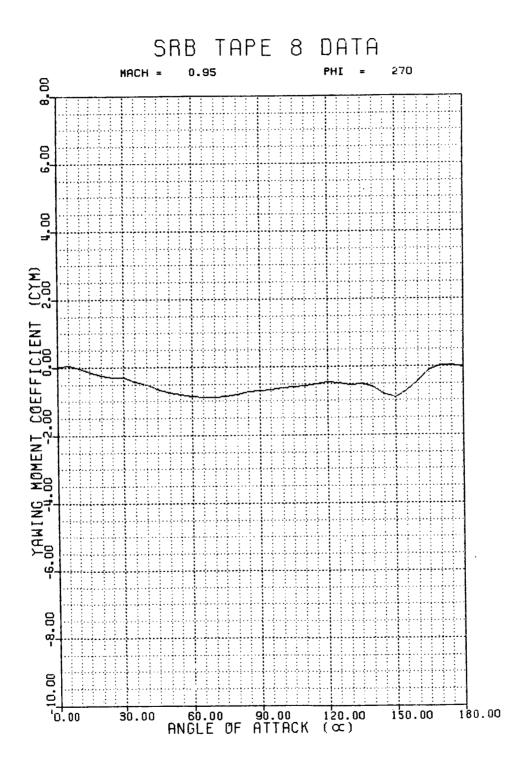


B-500

SRB TAPE 8 DATA 225 8,00 6.00 u. 00 YAWING MOMENT COEFFICIENT -8.00 0.00 60.00 90.00 ANGLE OF ATTACK 120.00 (cc) 180.00 150.00

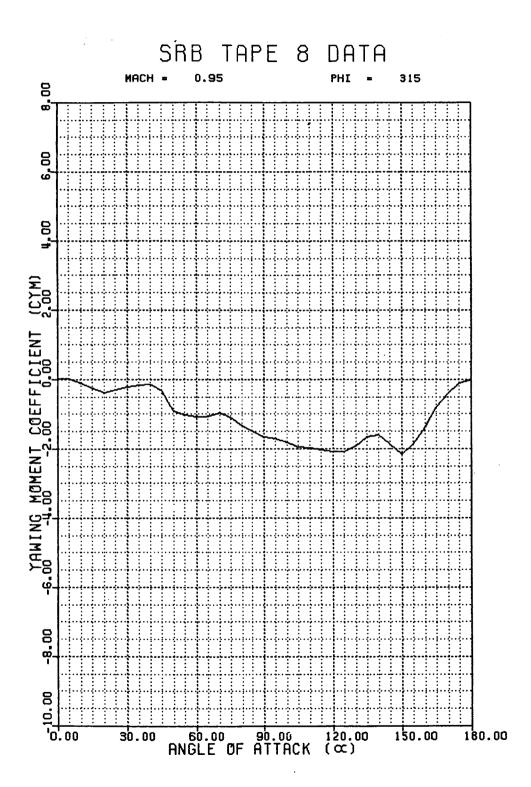
B-501

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

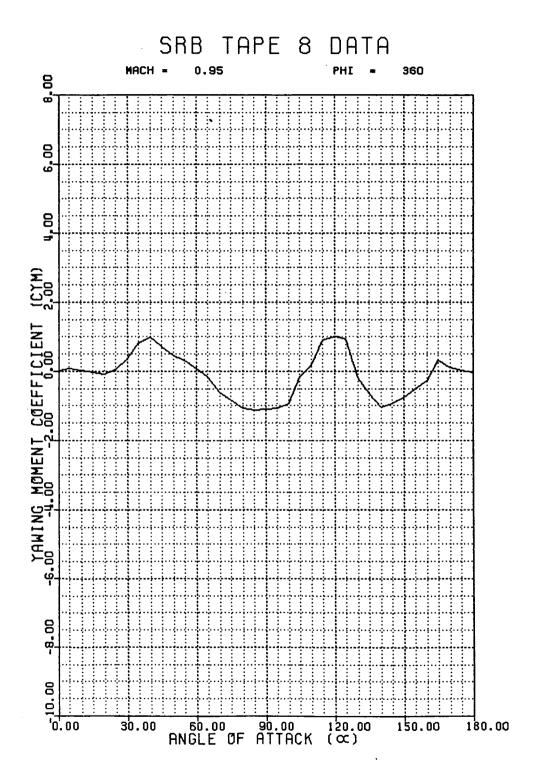


B-502

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

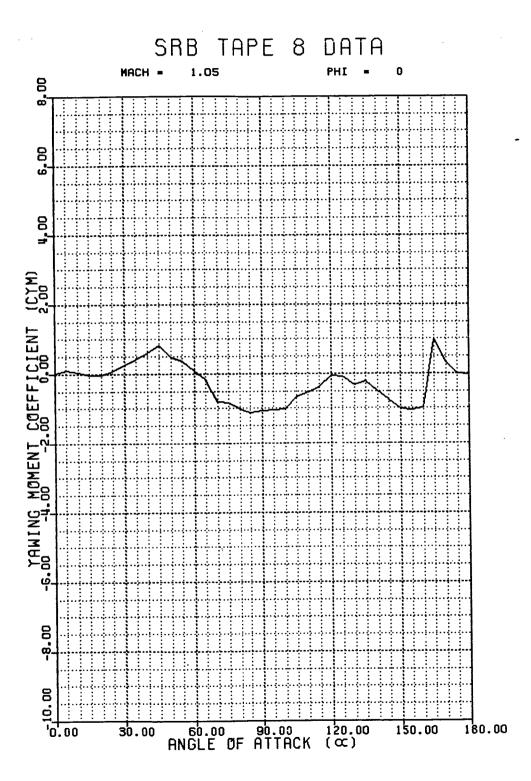


B-503



B-504

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

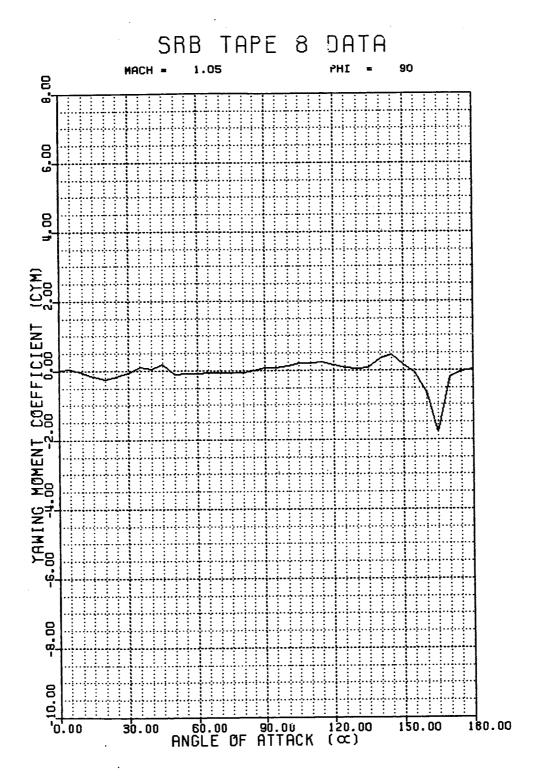


B-505

SRB TAPE 8 DATA 1.05 45 8,00 6.00 u. 00 YAWING MOMENT COEFFICIENT -8.00 00.00 120.00 (∝) 60.00 ANGLE OF 90.00 ATTACK 180.00 150.00 30.00

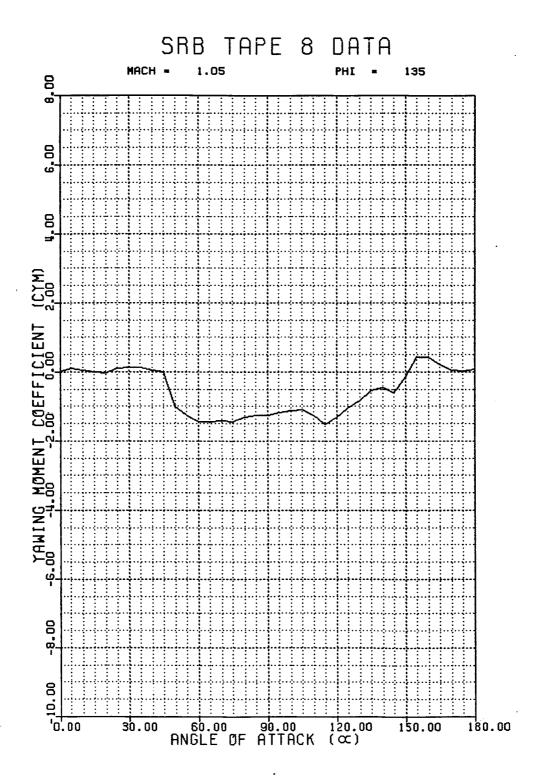
B-506

LOCKHEED-HUNTSYILLE ENGINEERING CENTER



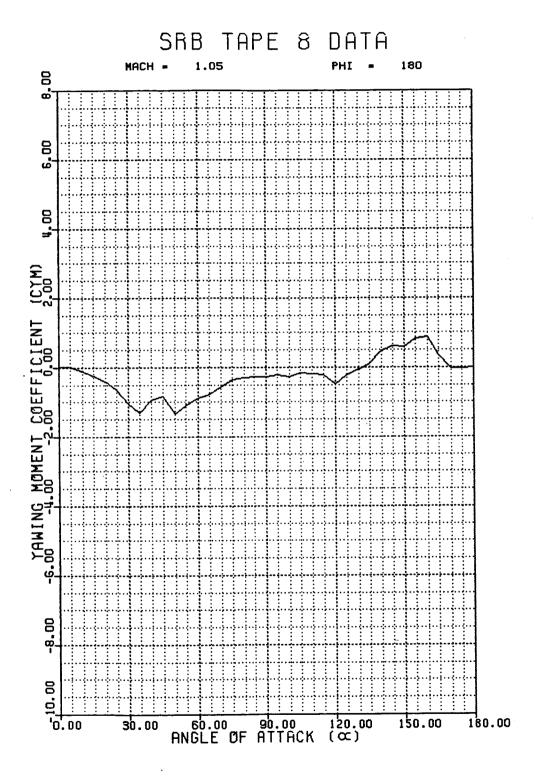
B-507

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

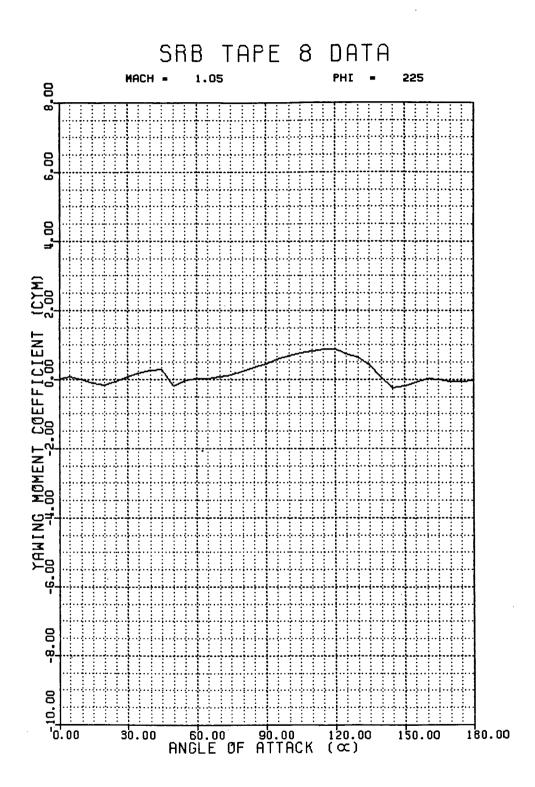


B-508

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

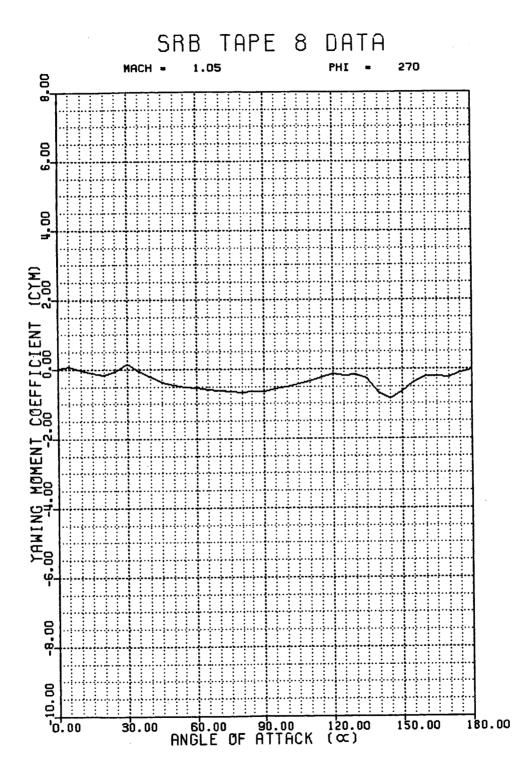


B-509

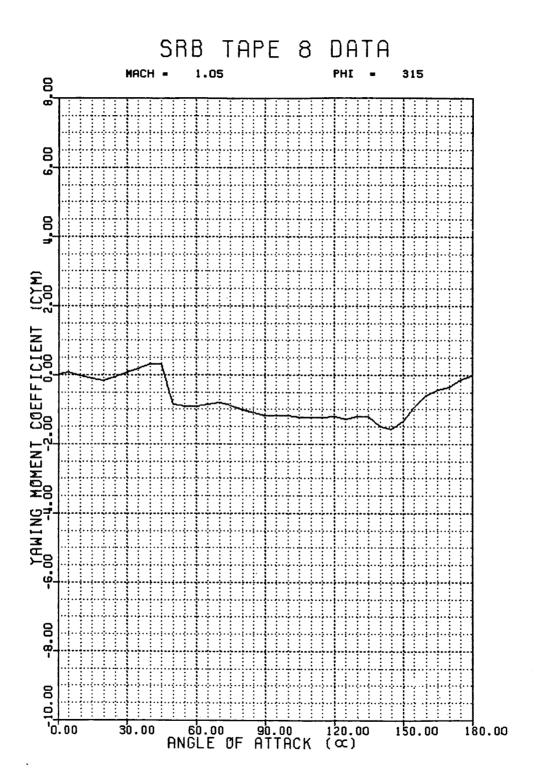


B-510

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

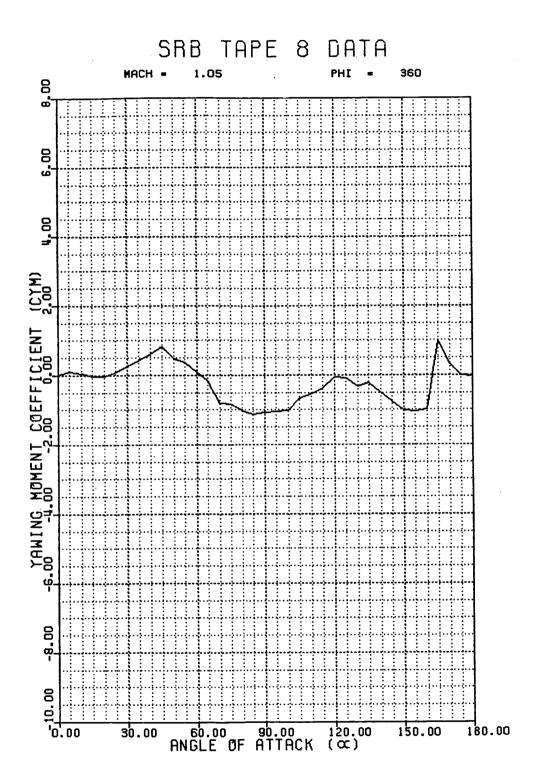


B-511
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

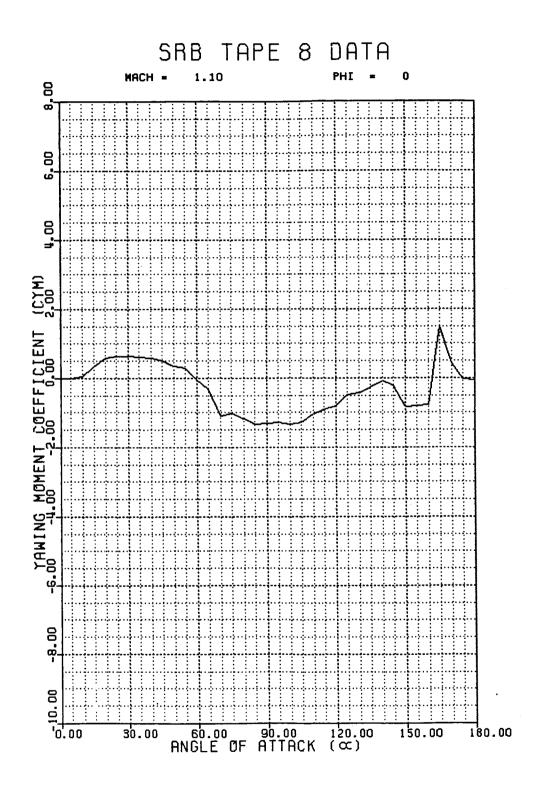


B-512

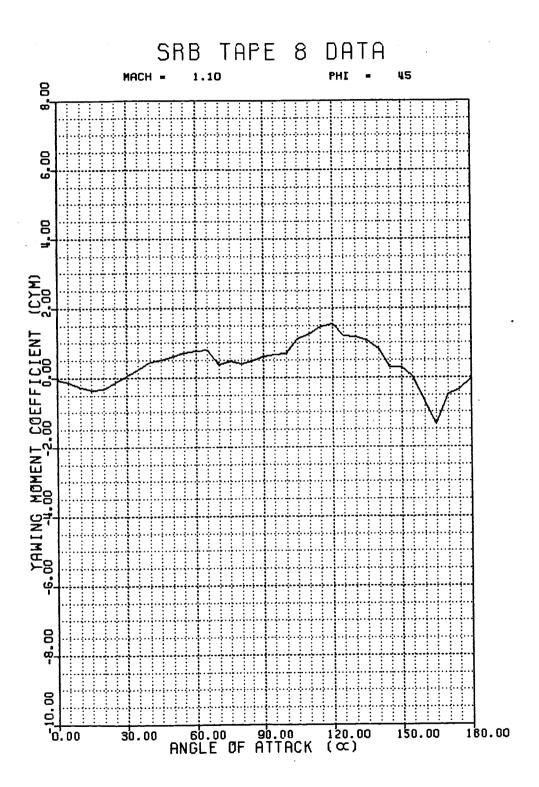
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



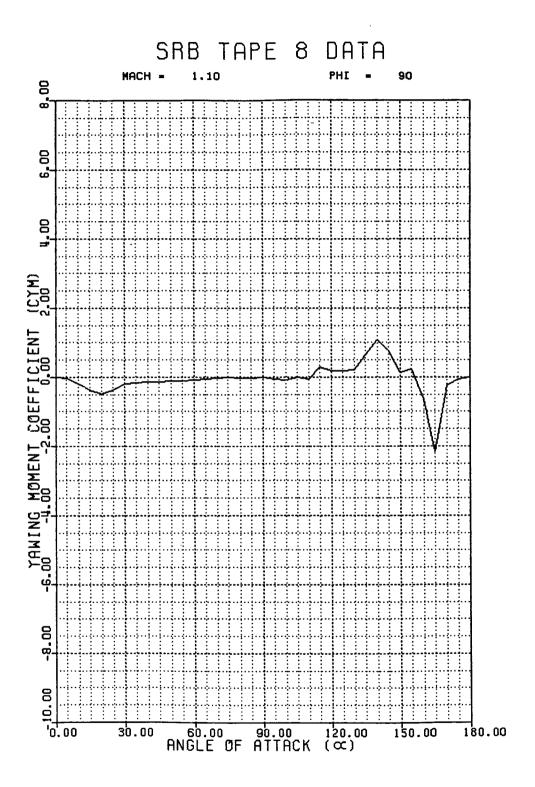
B-513



B-514
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

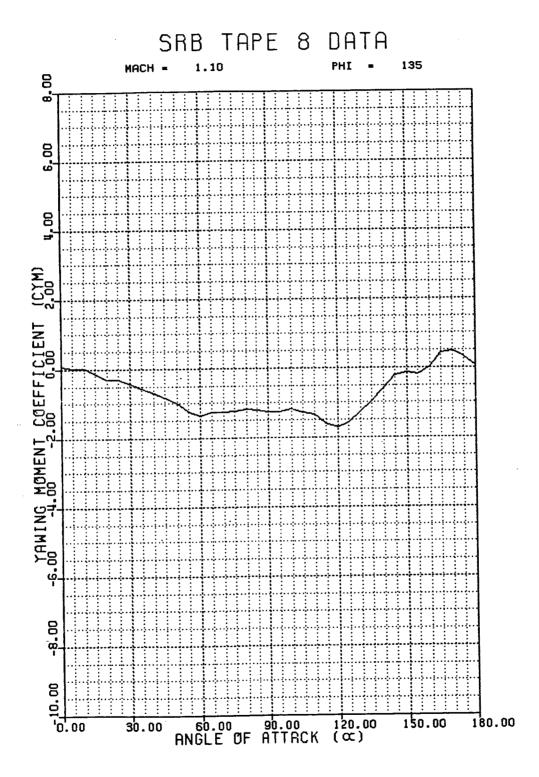


B-515
.
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

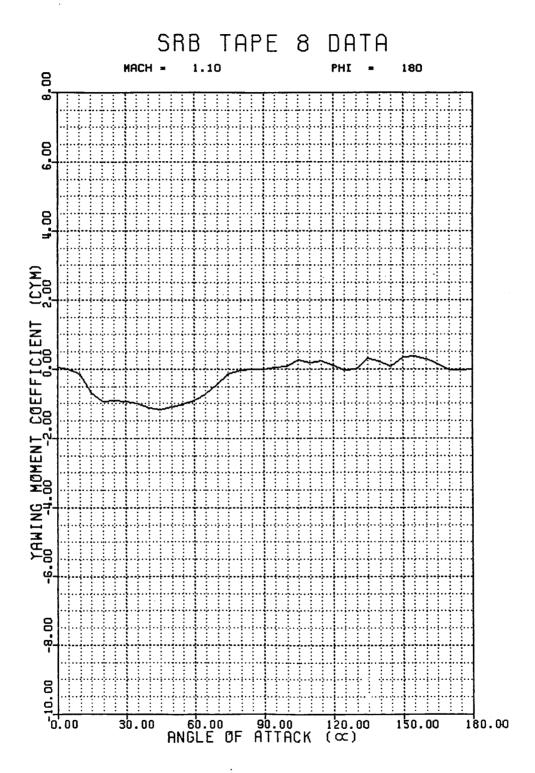


B-516

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

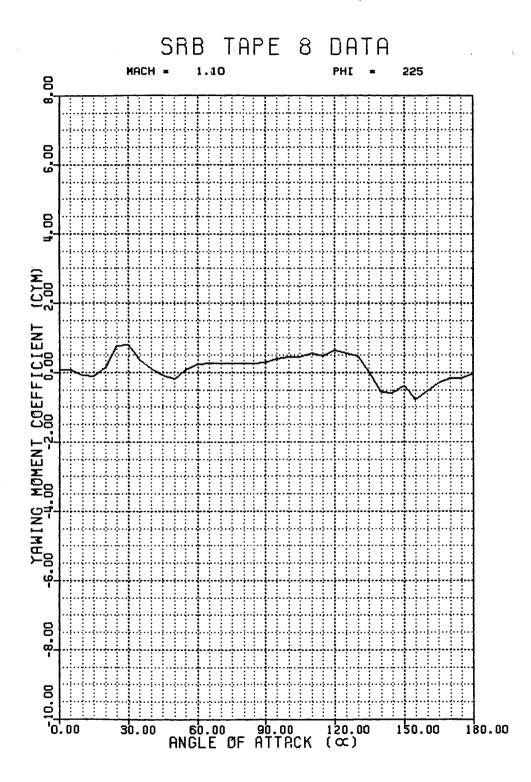


B-517
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

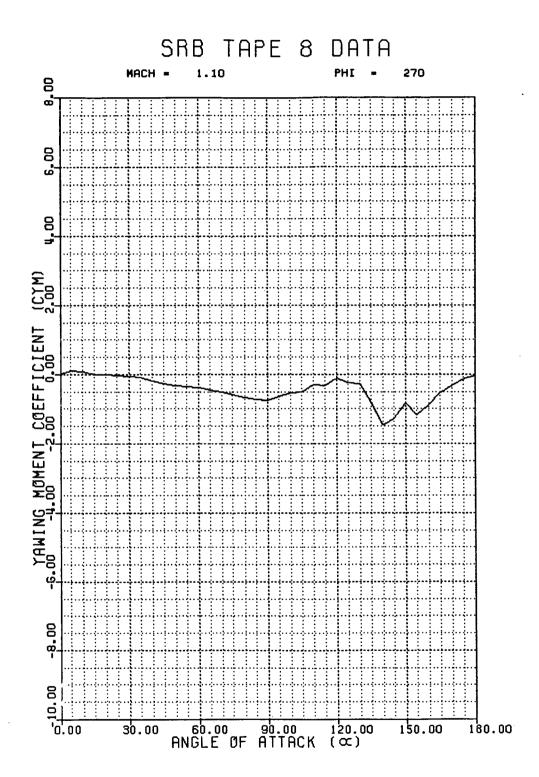


B-518

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

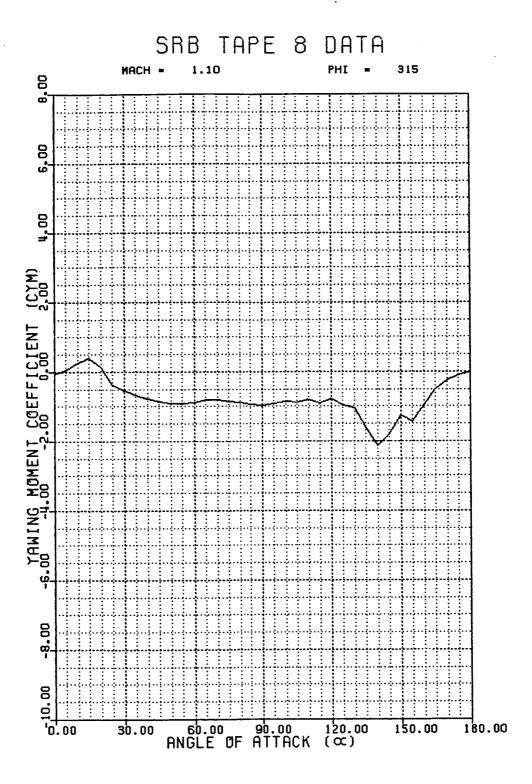


B-519
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

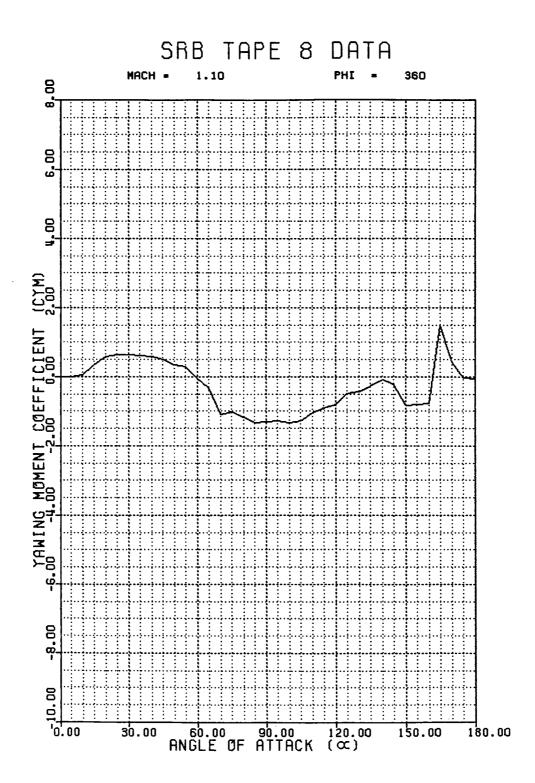


B-520

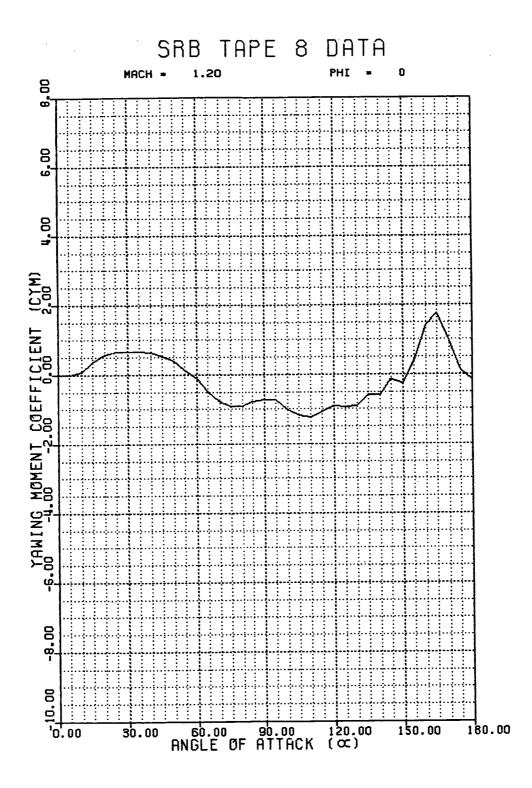
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



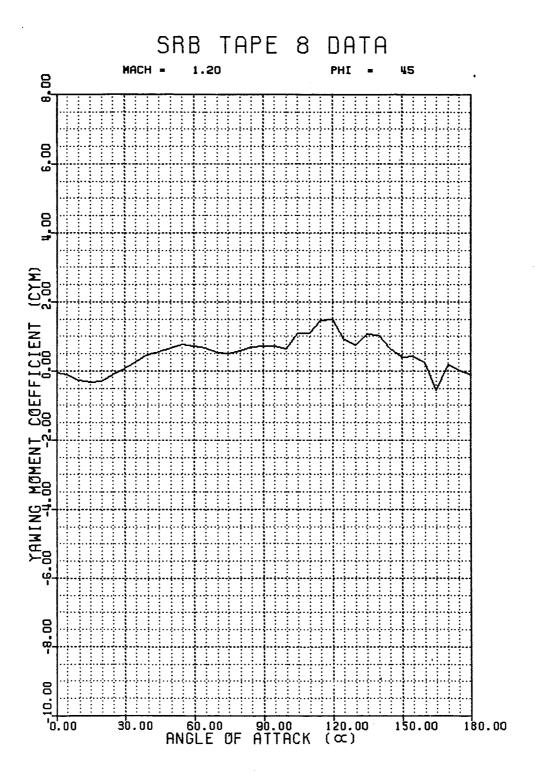
B-521
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



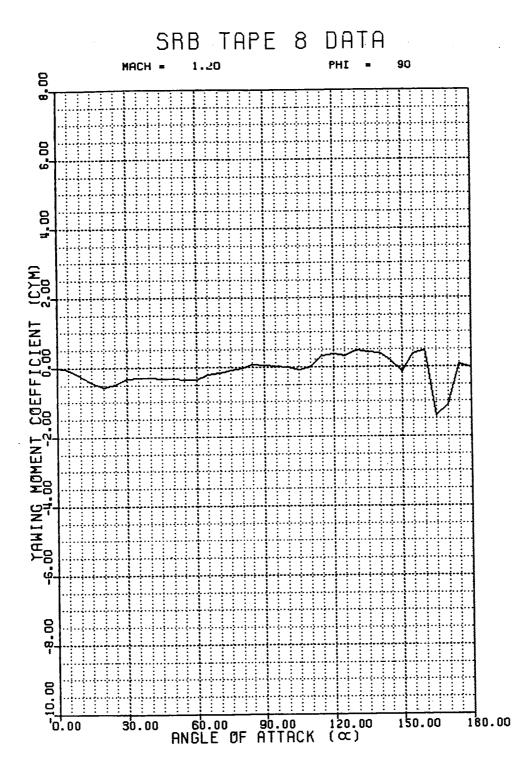
B-522



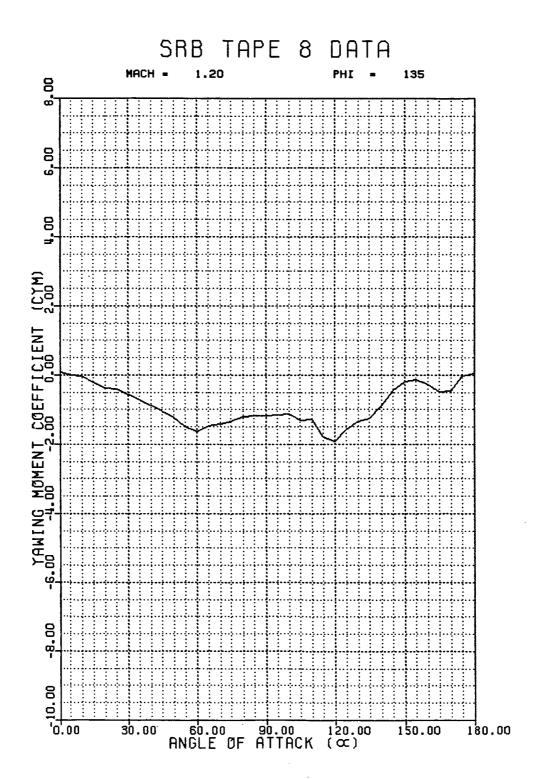
B-523
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



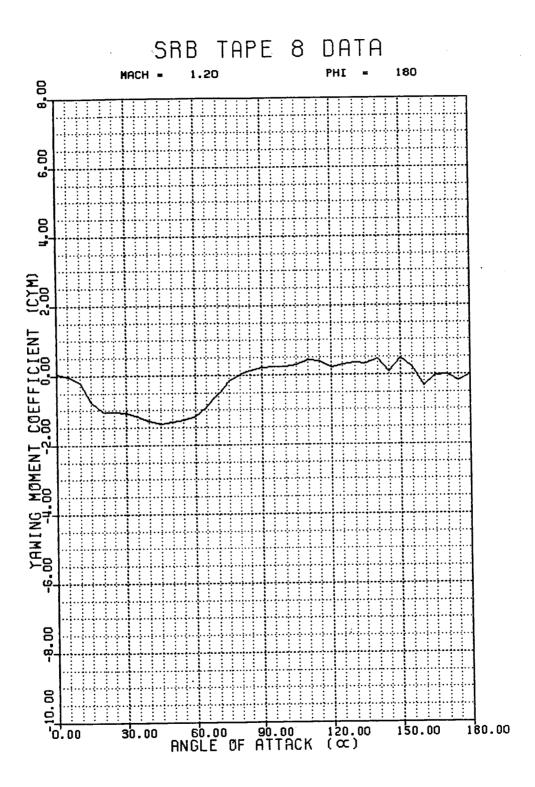
B-524
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-525
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

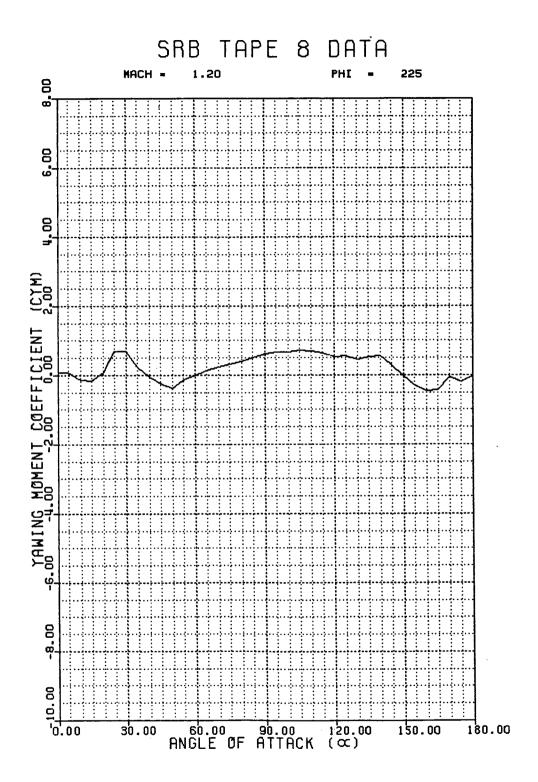


B-526



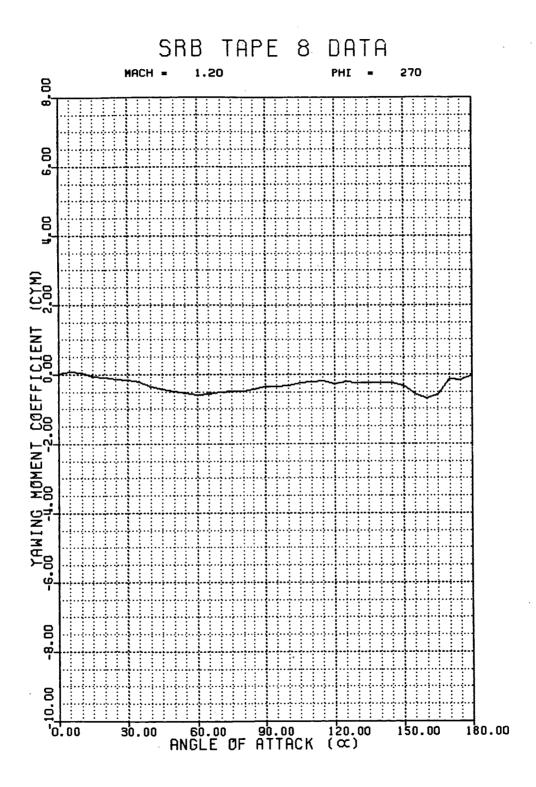
B-527

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-528

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-529

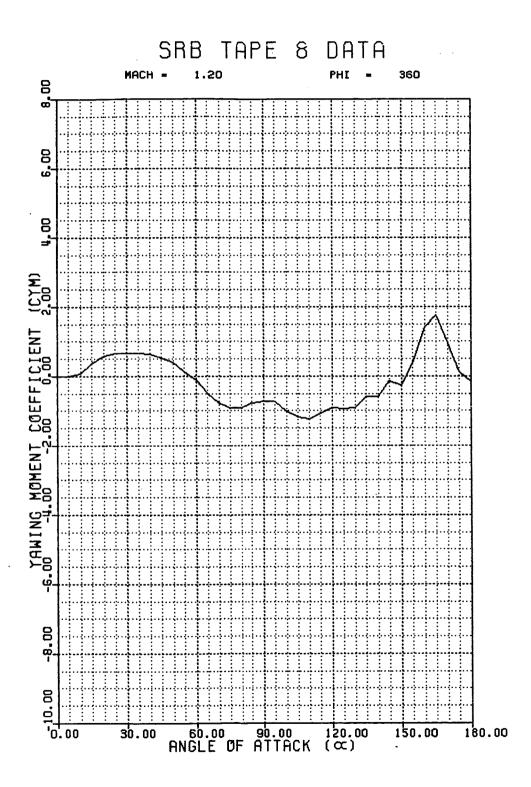
SRB TAPE 8 DATA 8,00 8.00 u, 00 YAWING MOMENT COEFFICIENT -8-00 0.00

B-530 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

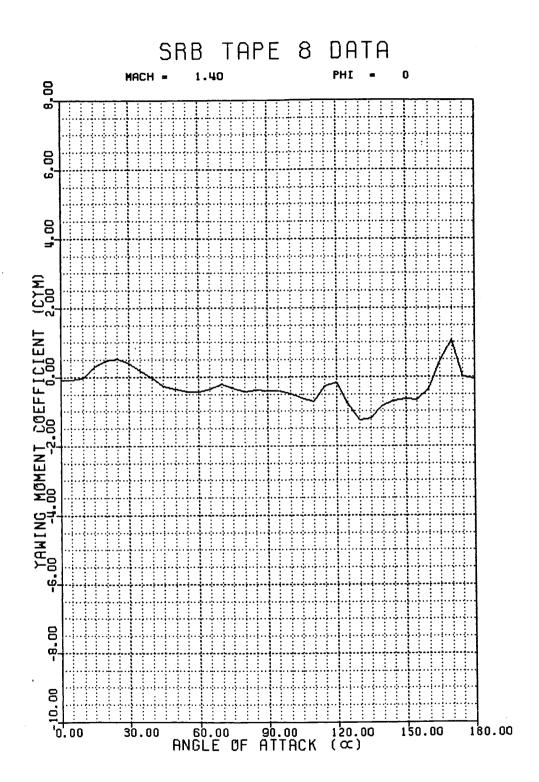
60.00 90.00 120.00 ANGLE OF ATTACK (∝)

150.00

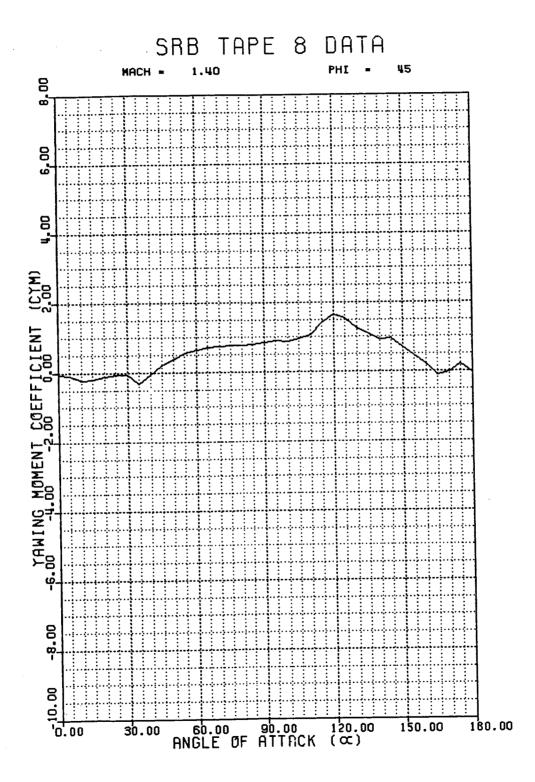
30.00



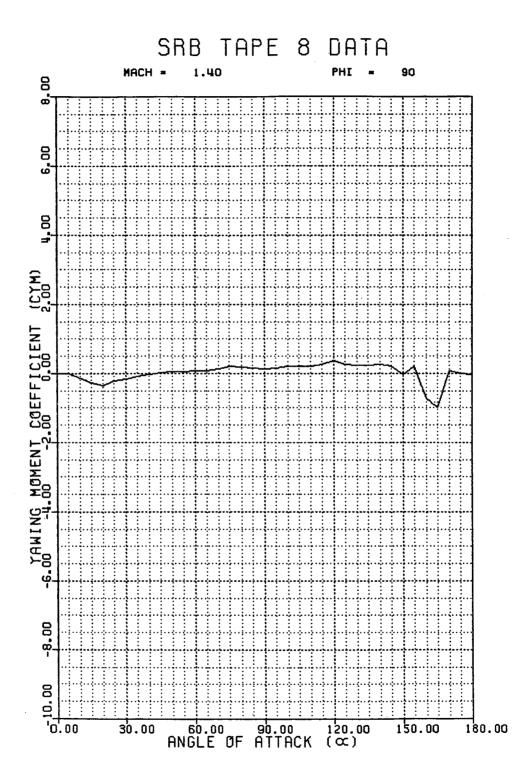
B-591



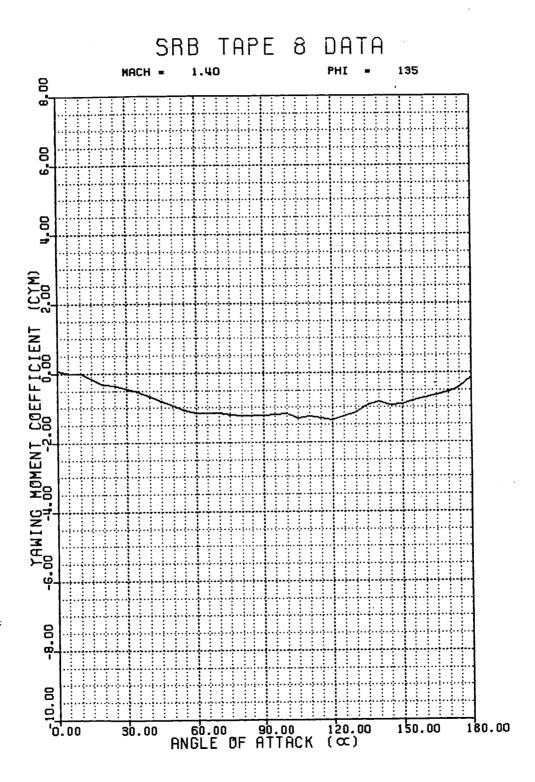
B-532
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-533
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

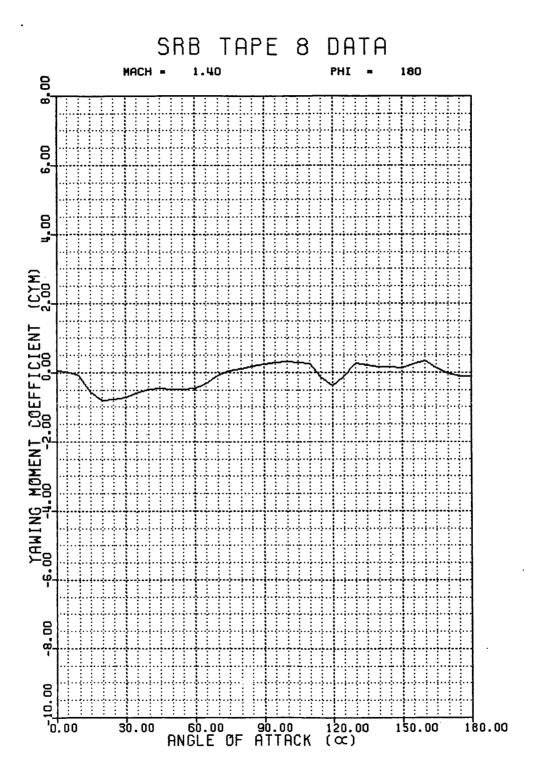


B-534
•
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

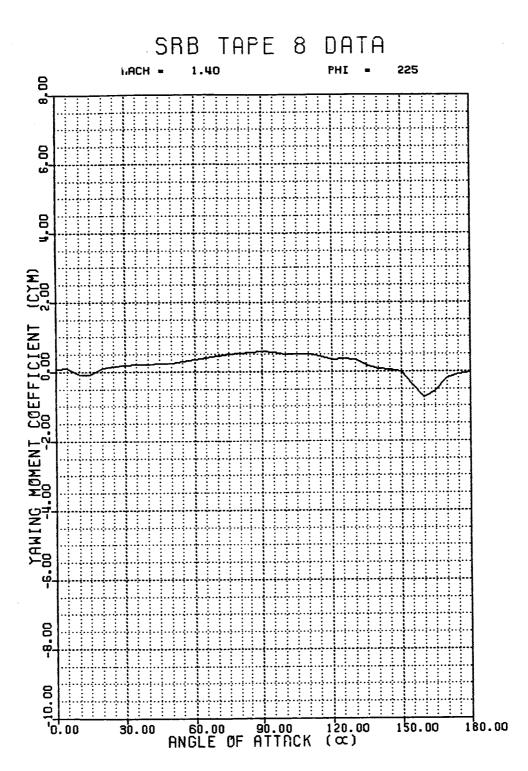


B-535

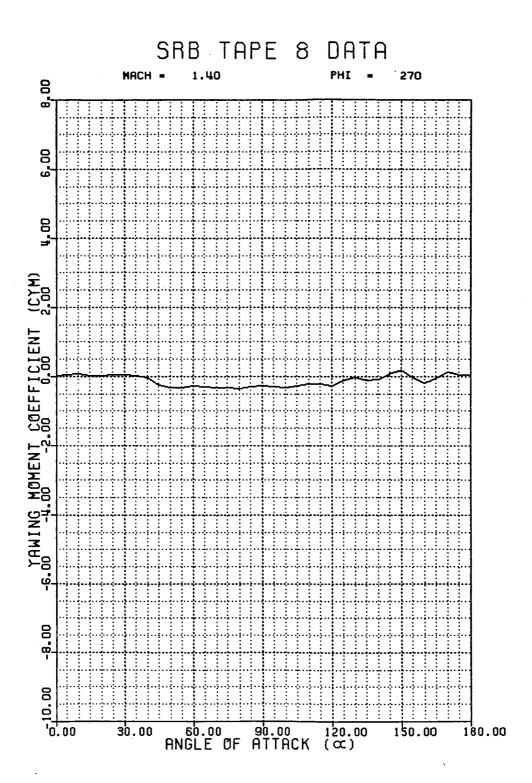
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



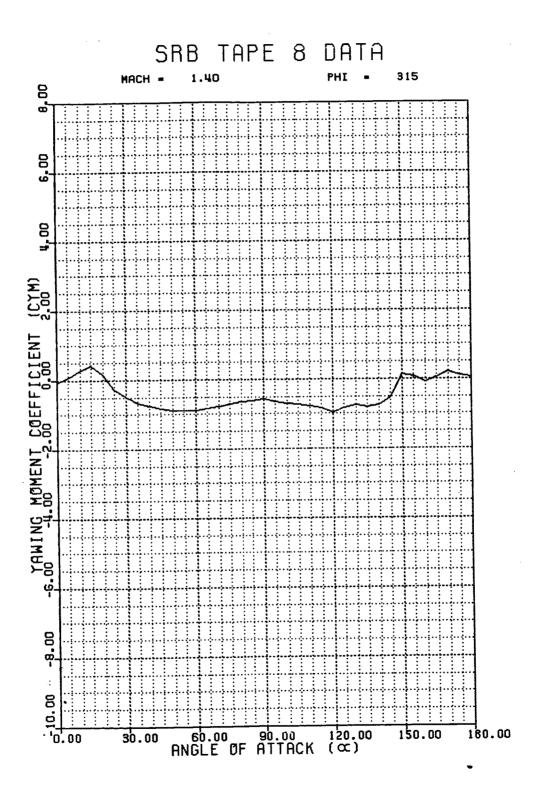
B-536
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



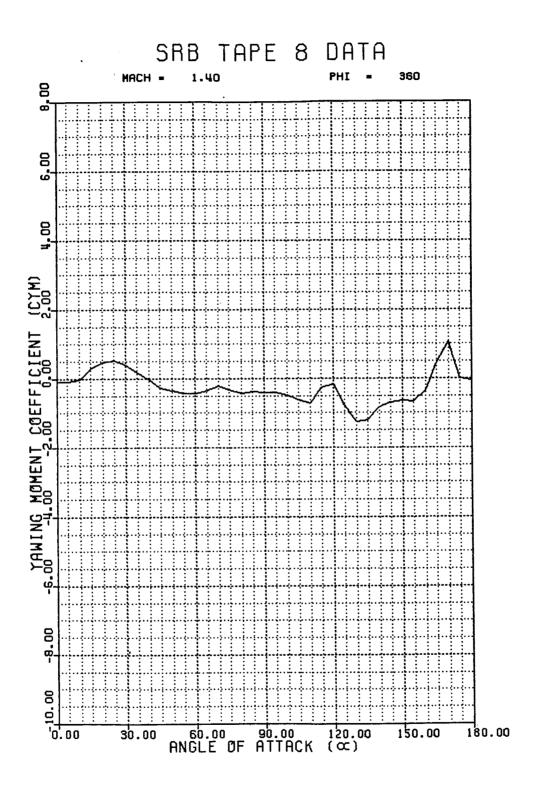
B-537



B-538

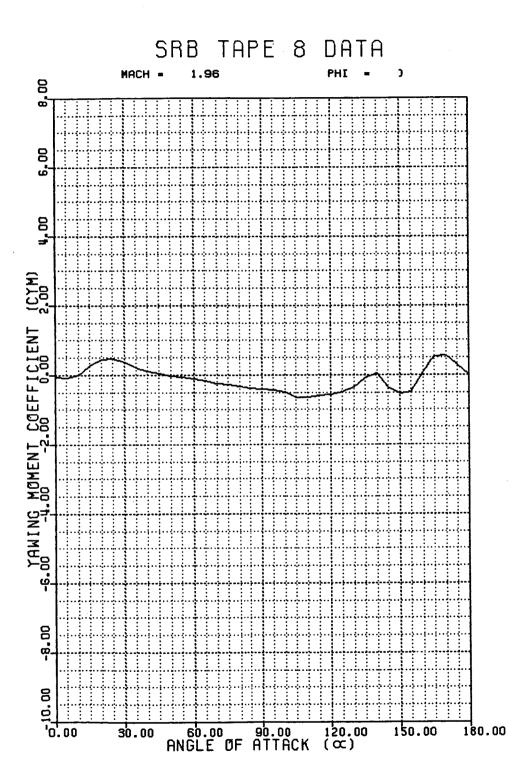


B-539

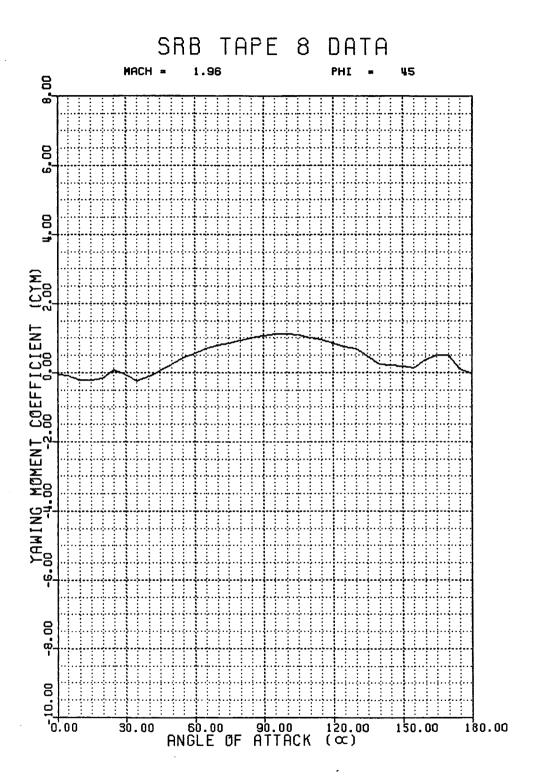


B-540

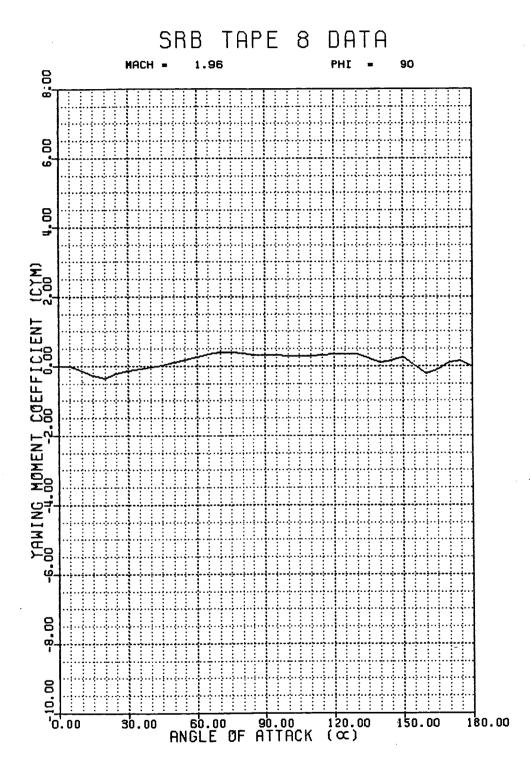
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



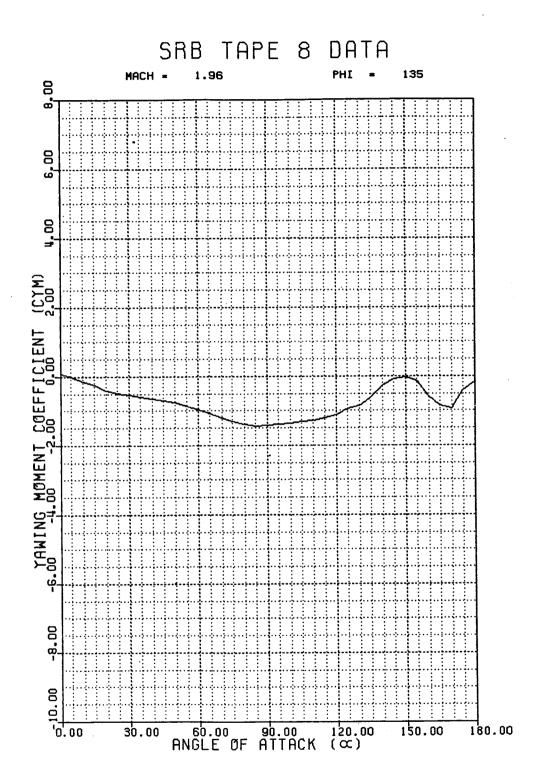
B-541



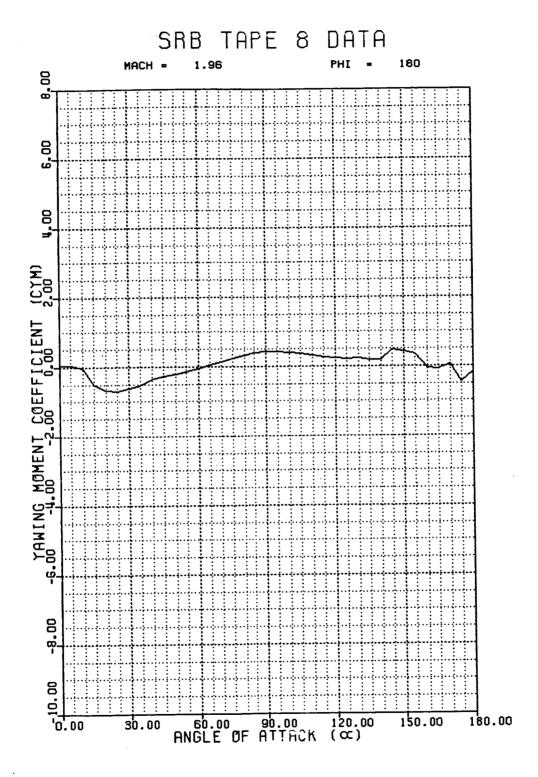
B-542
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-543



B-544
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

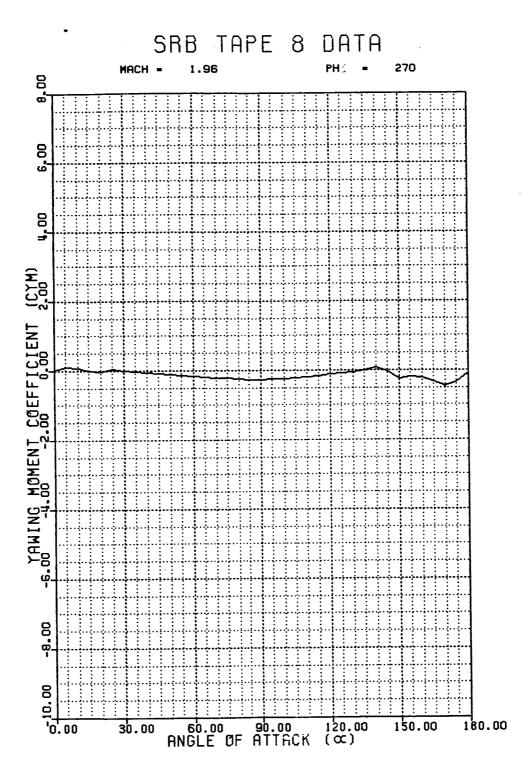


B-545
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 1.96 225 6.00 YAWING MOMENT COEFFICIENT 00.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 180.00

B-546

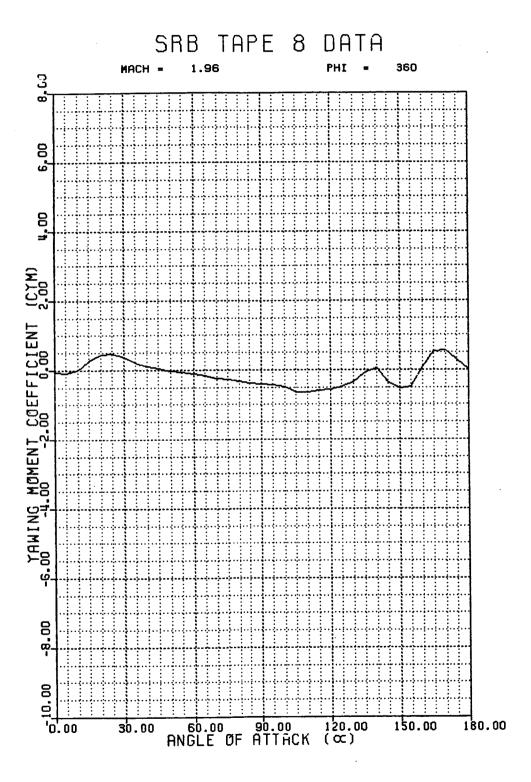
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



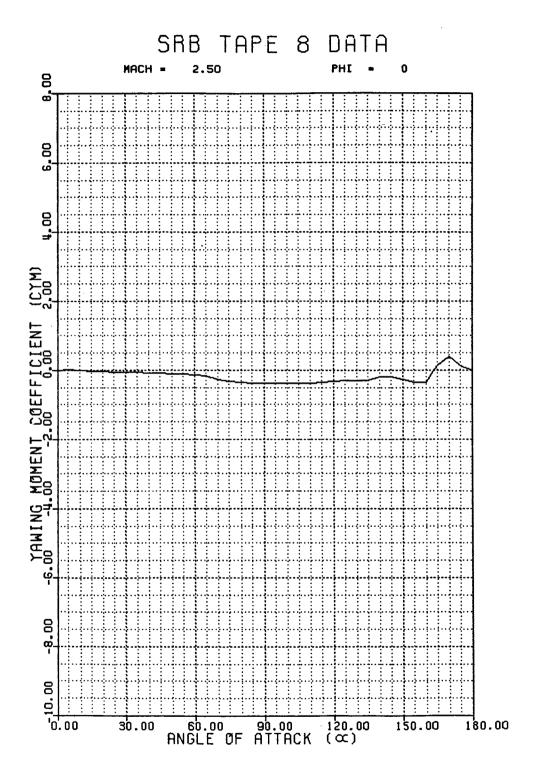
B-547
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 315 8,00 6.00 u. 00 YAMING MOMENT COEFFICIENT -8.00 0.00 60.00 90.00 ANGLE OF ATTACK 180.00 150.00

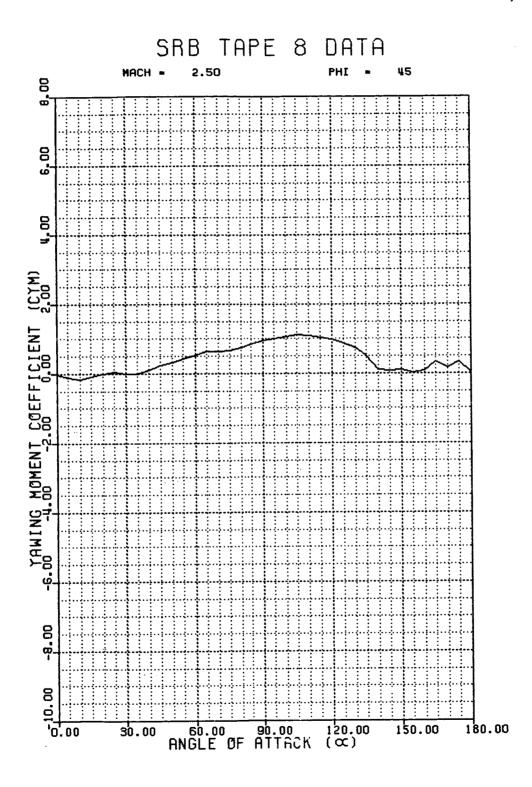
B-548



B-549
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



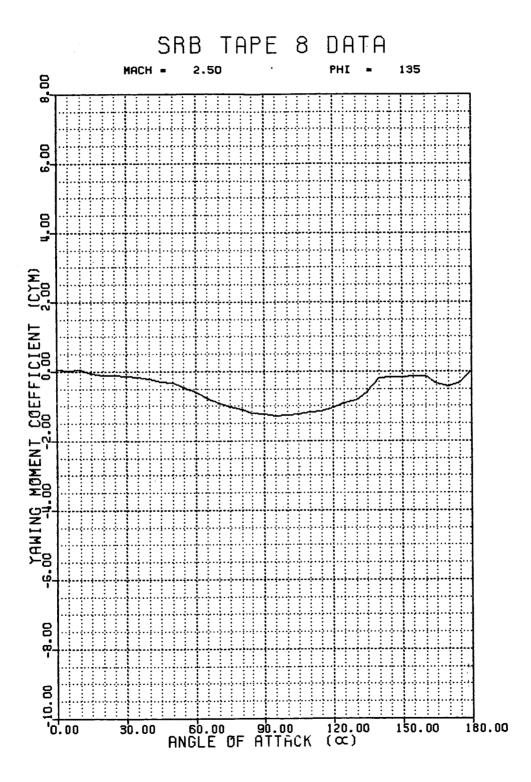
B-550
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



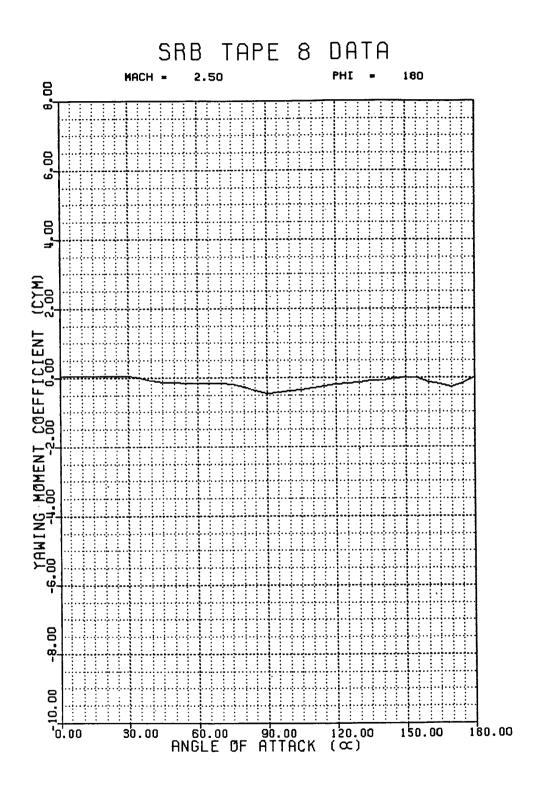
B-551
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

SRB TAPE 8 DATA MACH = 2.50 90 8,00 6.00 u, 00 YAWING MOMENT COEFFICIENT 00.01 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 30.00 150.00 180.00

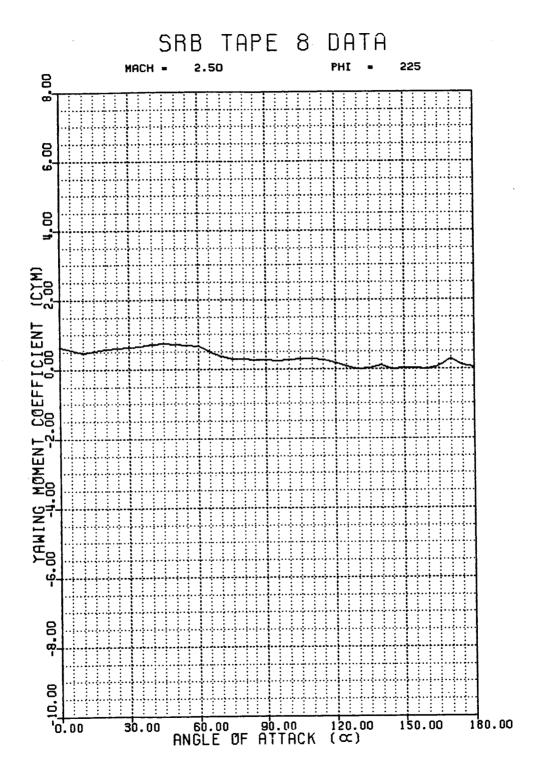
B-552
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



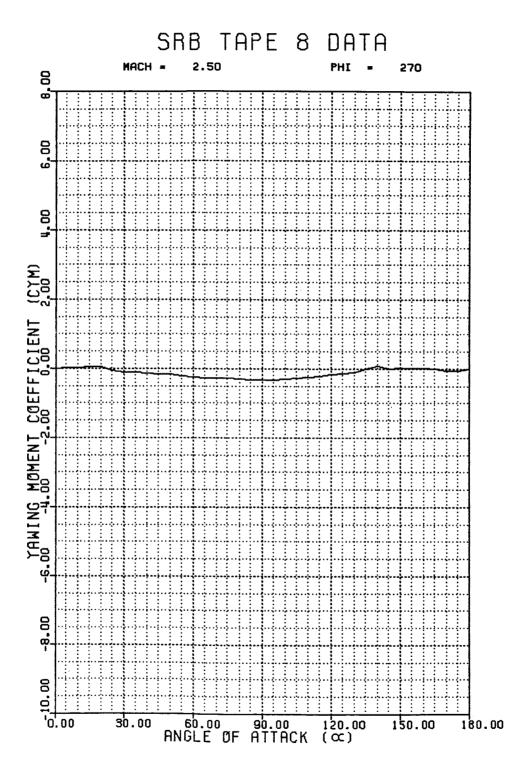
B-553
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



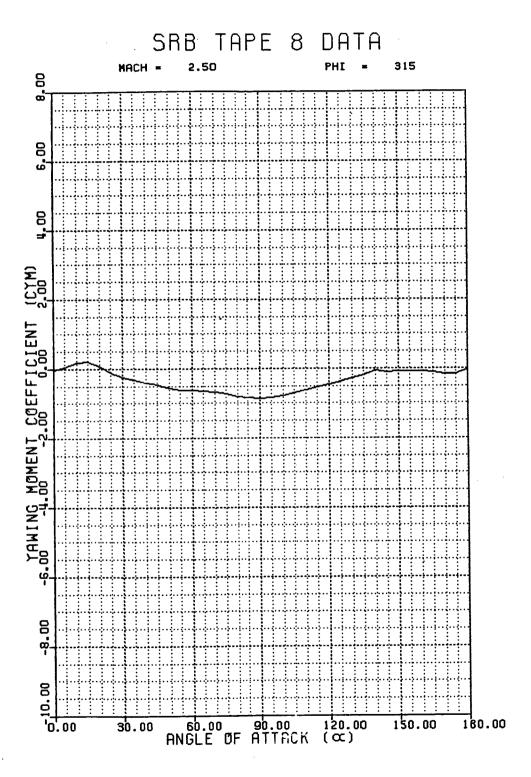
B-554
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-555

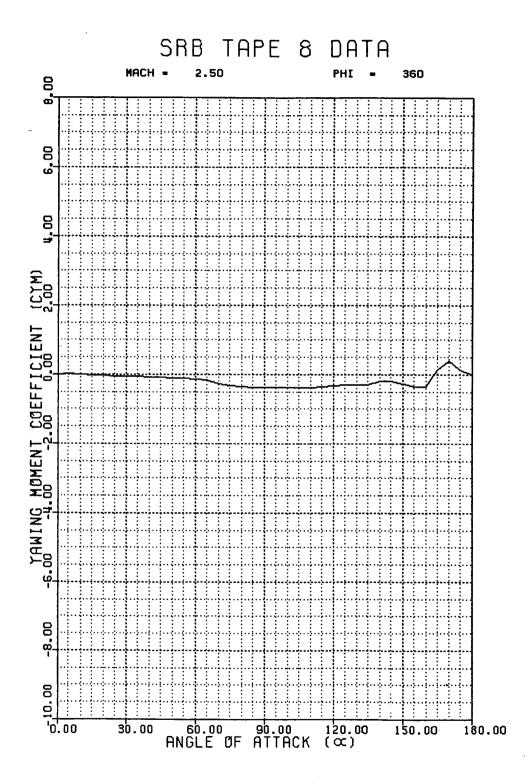


B-556
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

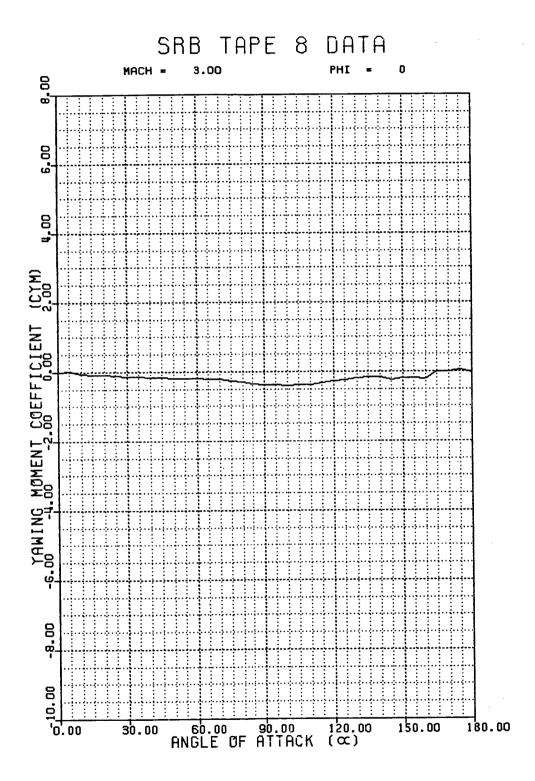


B-557

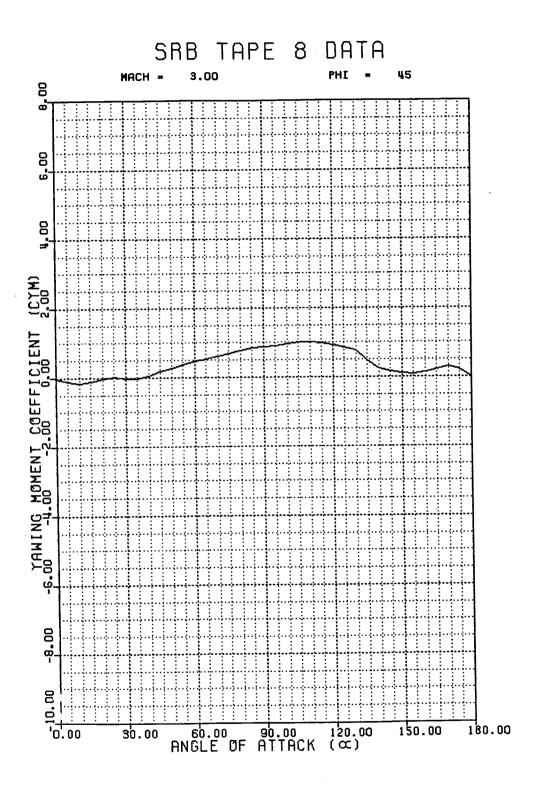
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



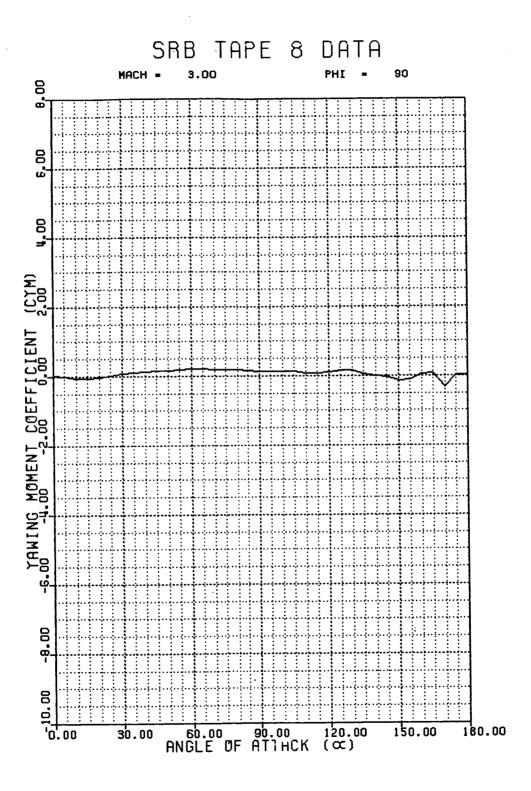
B-558
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



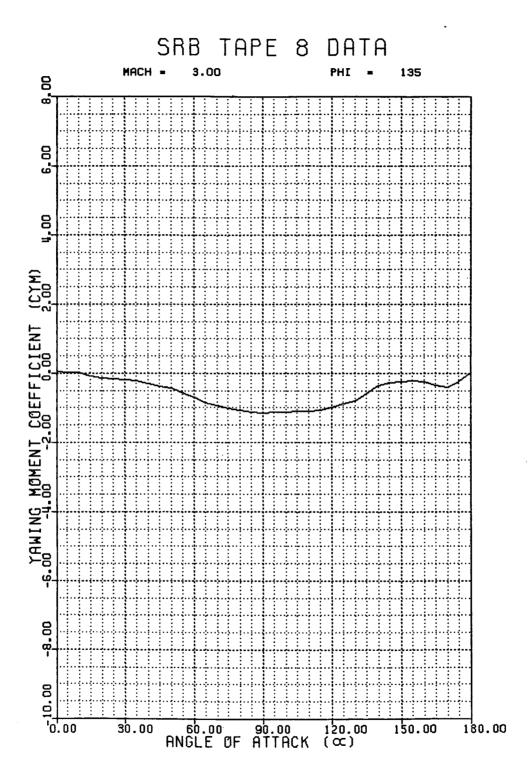
B-559



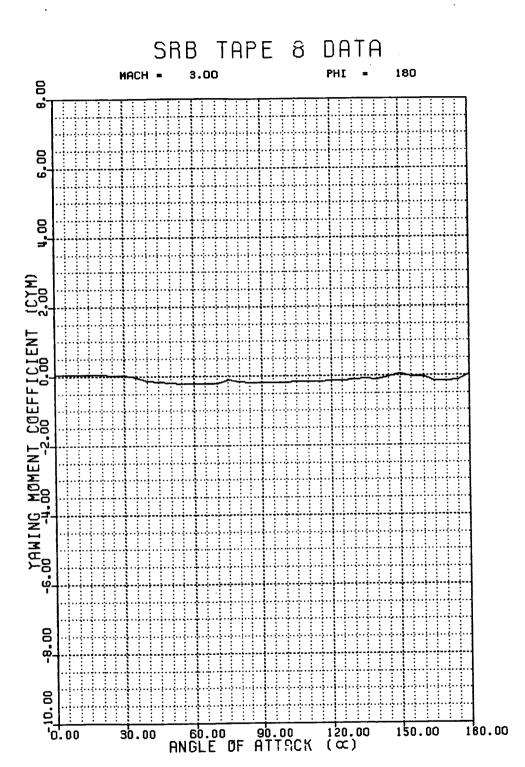
B-560
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



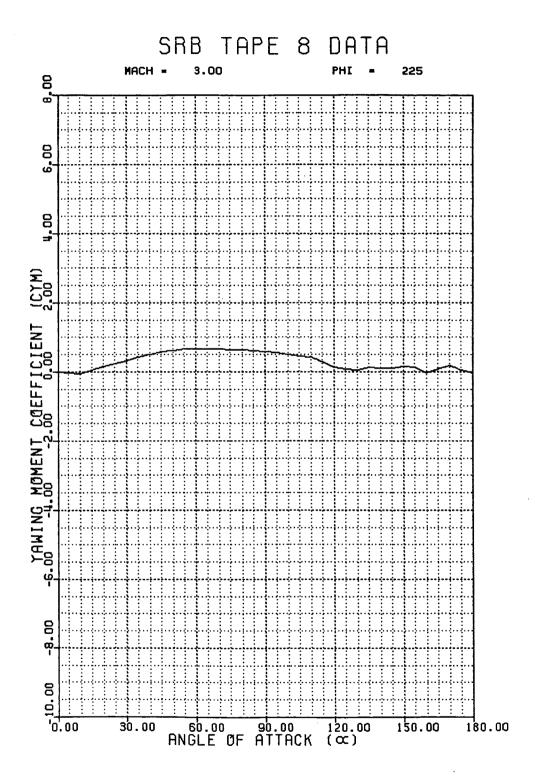
B-561
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



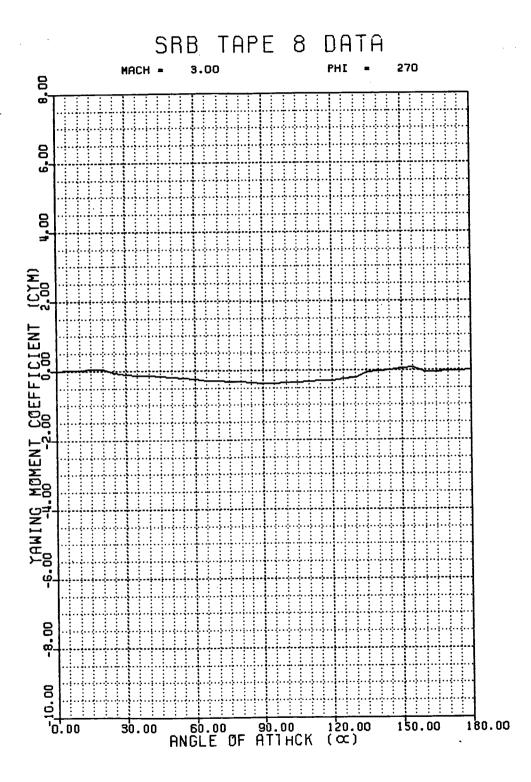
B-562
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



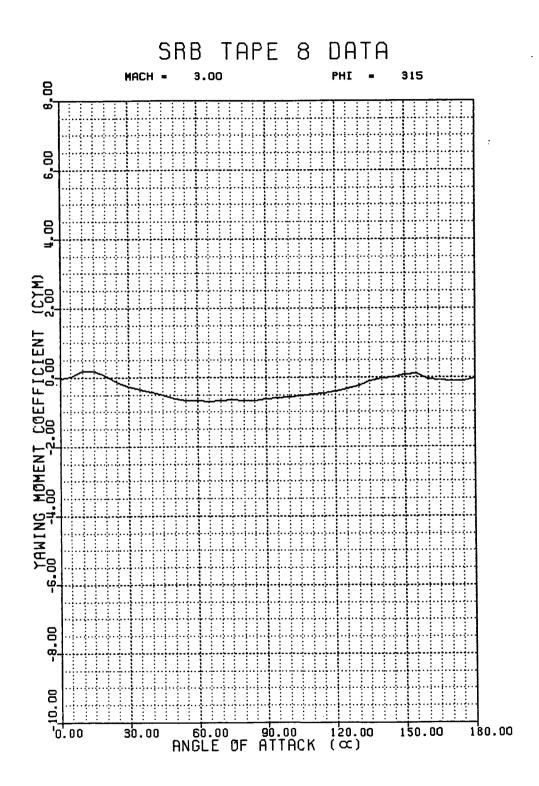
B-563
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



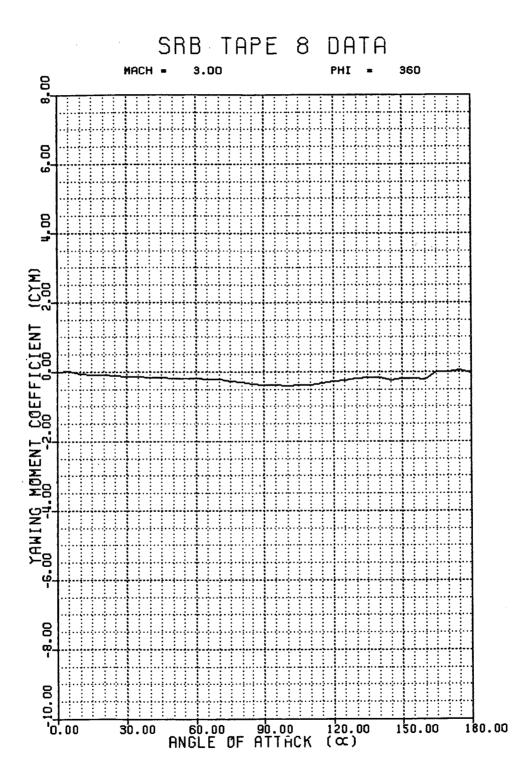
B-564
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-565

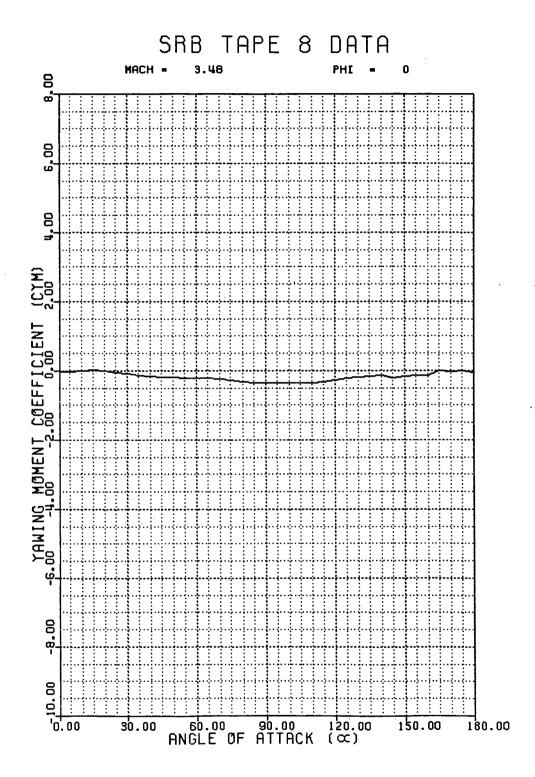


B-566
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

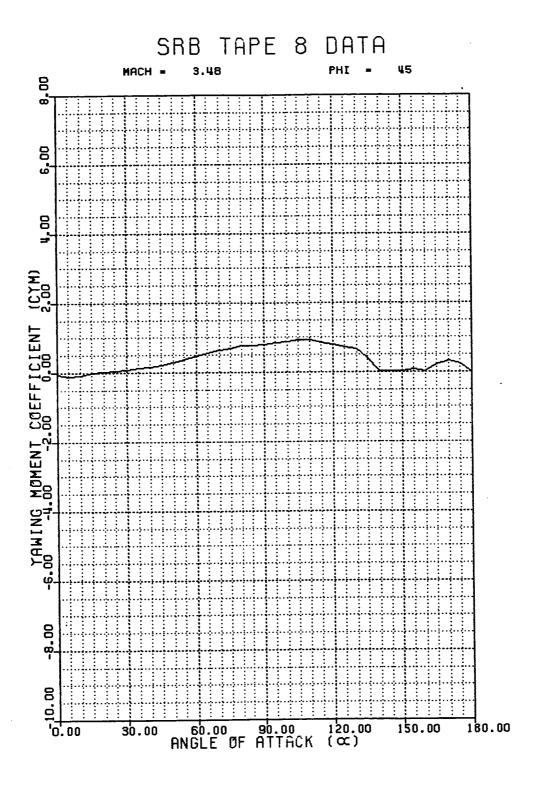


B-567

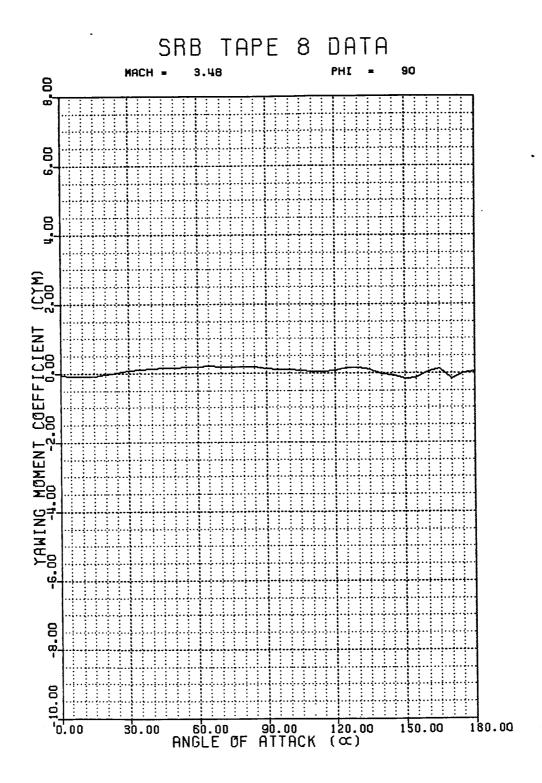
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-568
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

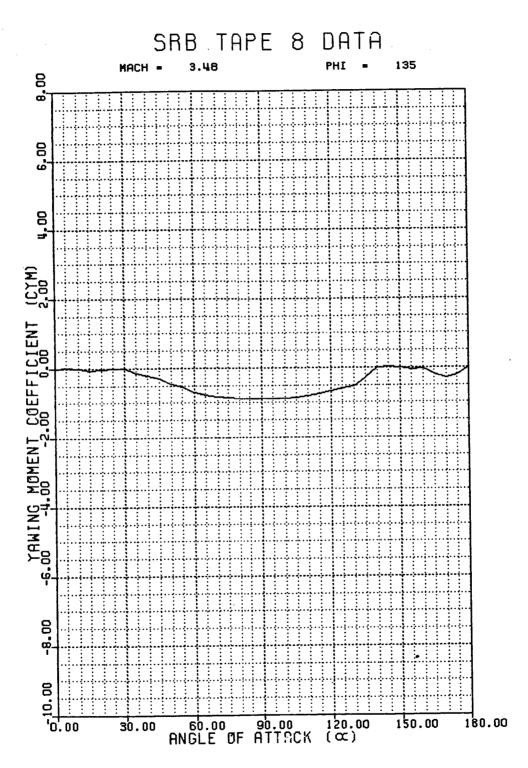


B-569
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



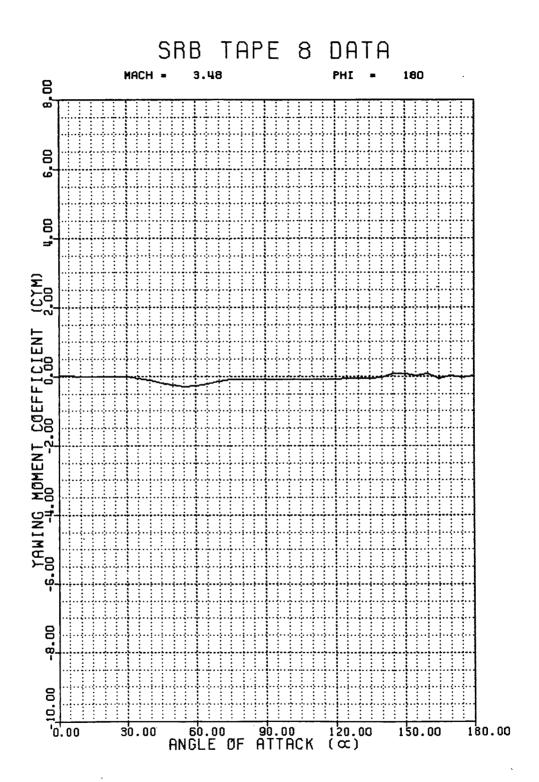
B-570

LOCKHEED-HUNTSYILLE ENGINEERING CENTER



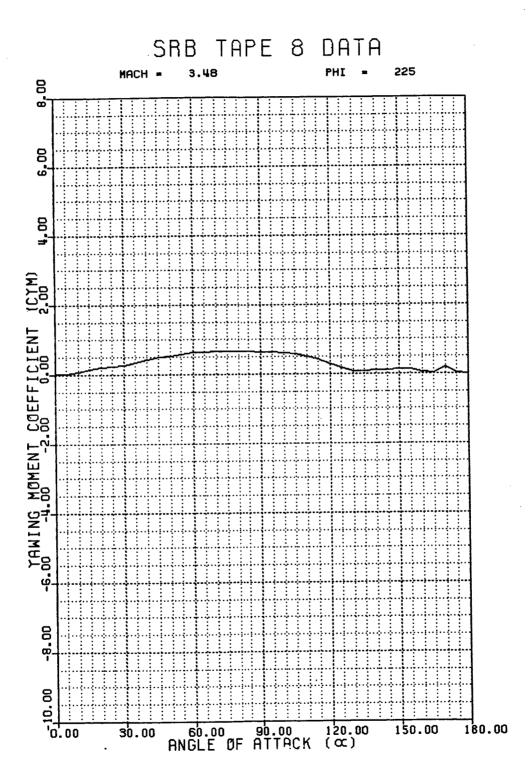
B-571

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



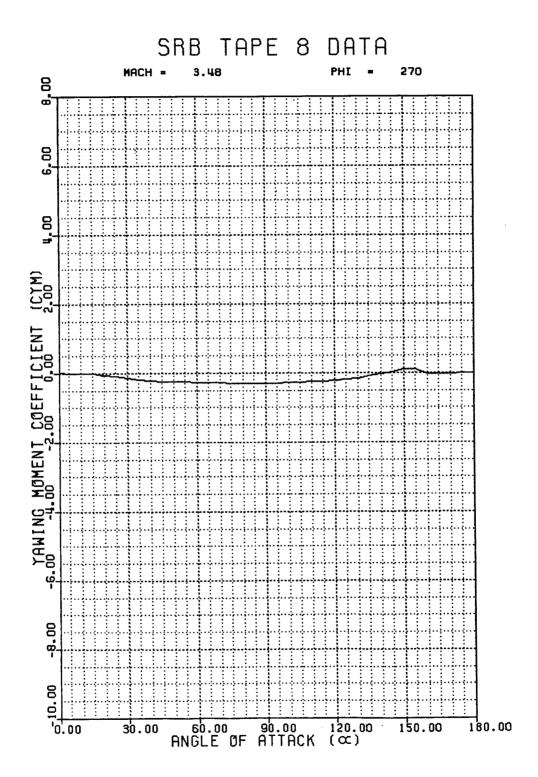
B-572

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

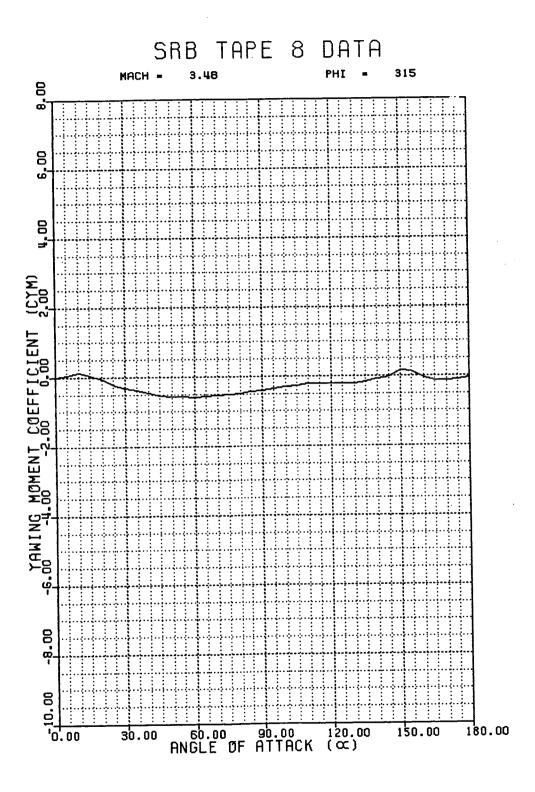


B-573

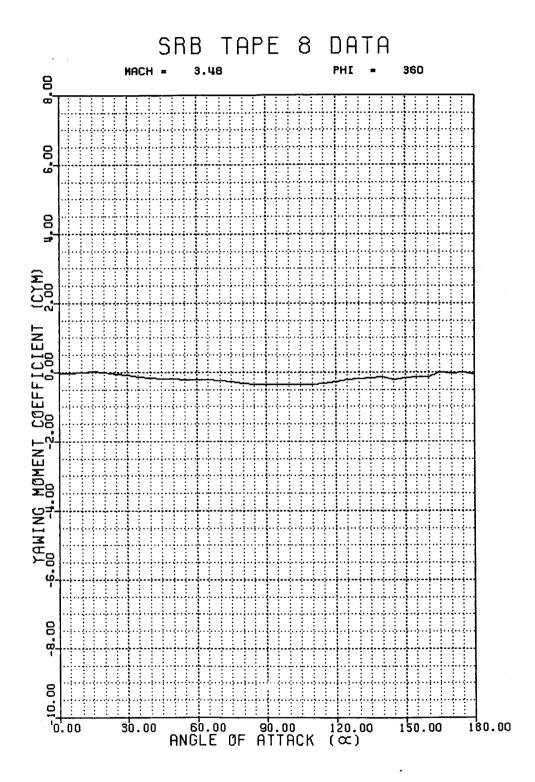
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-574
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-575
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

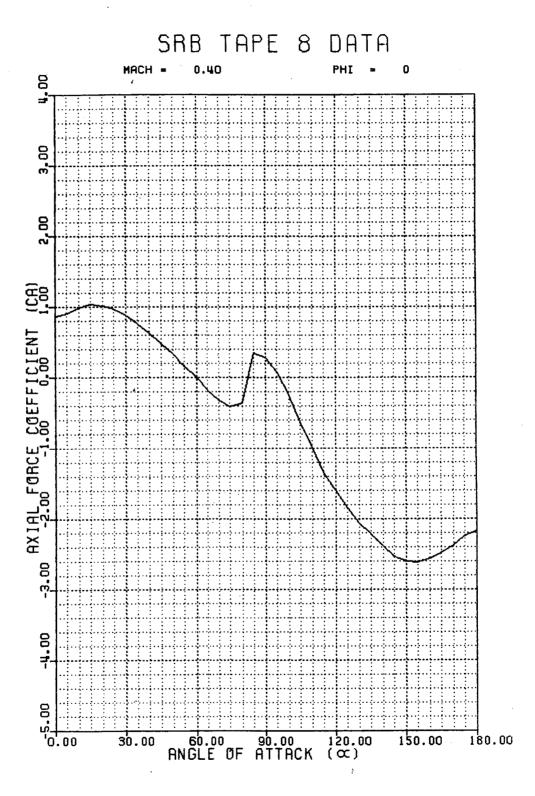


B-576

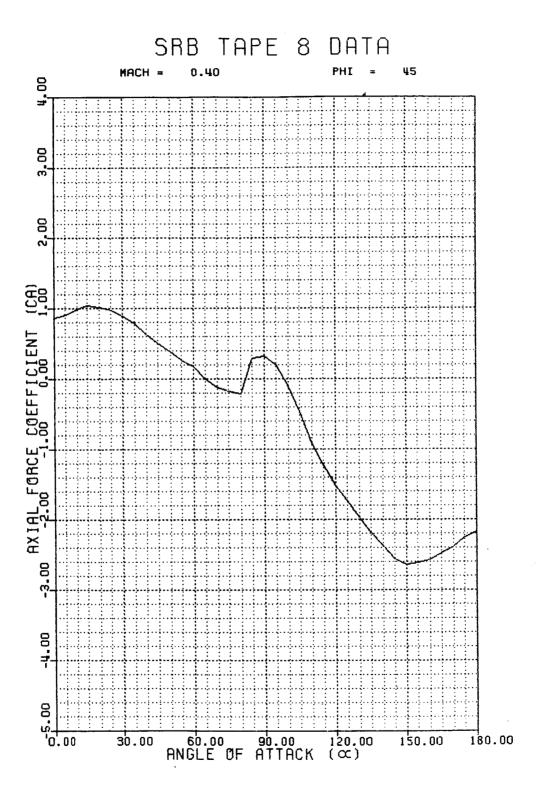
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

AXIAL FORCE (CA)

Mach Number	Page
0.4	B-577
0.5	B-586
0.55	B-595
0.6	в-604
0.7	B-613
0.8	B-622
0.9	B-631
0.95	B-640
1.05	B-649
1.1	B-658
1.2	B~667
1.4	B-676
1.96	B-685
2.5	B-694
3.0	B-703
3.48	B-712

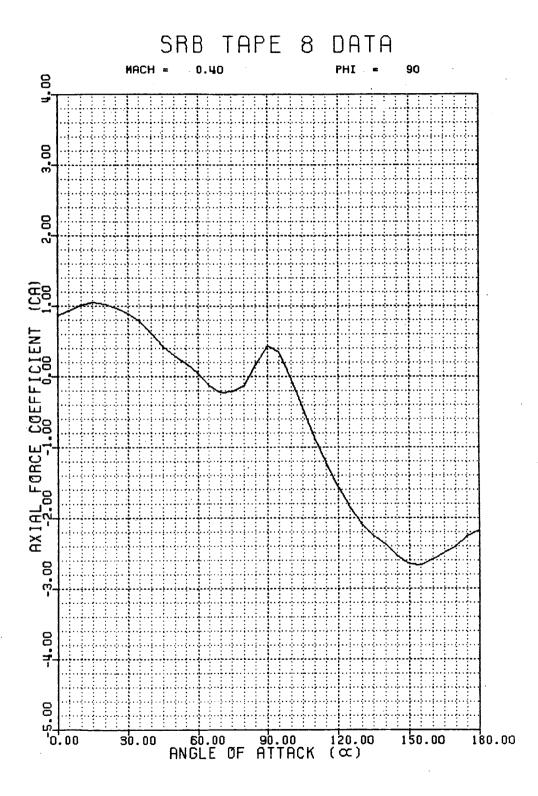


B-577
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

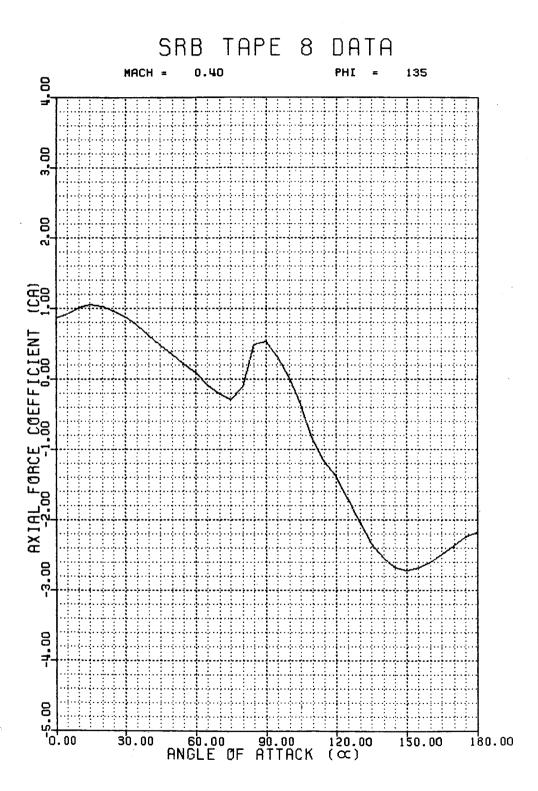


. B-578

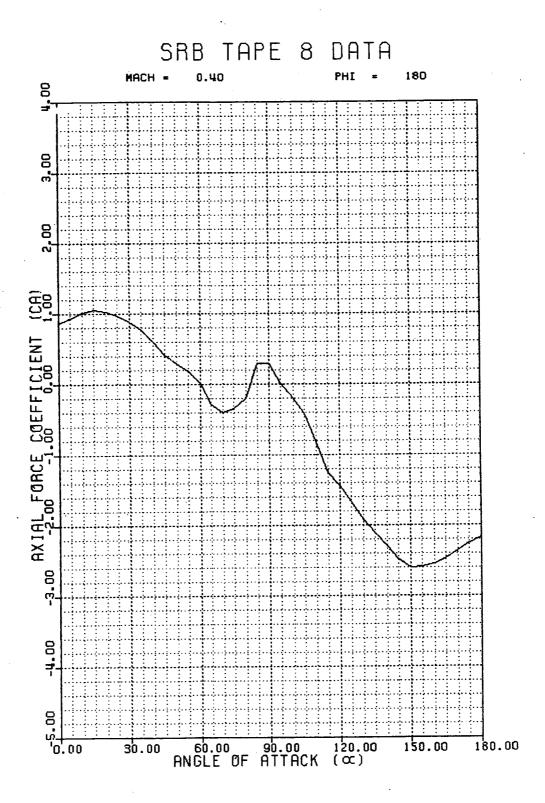
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-579

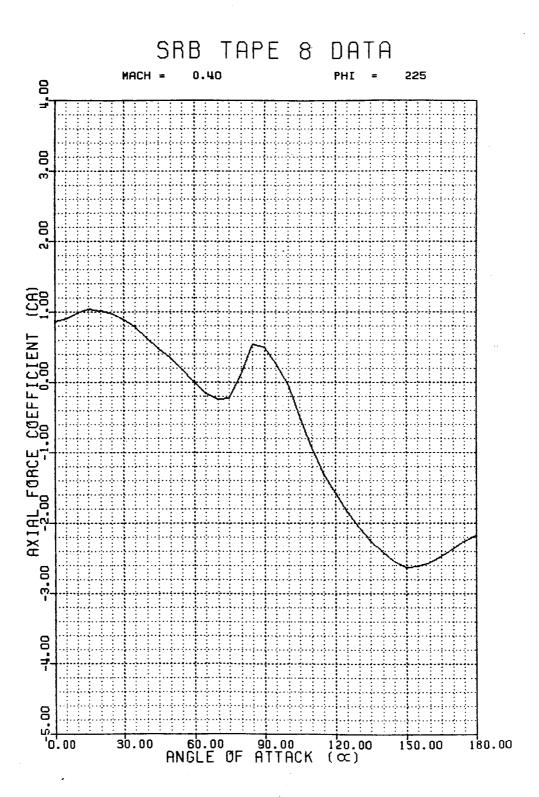


B-580
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

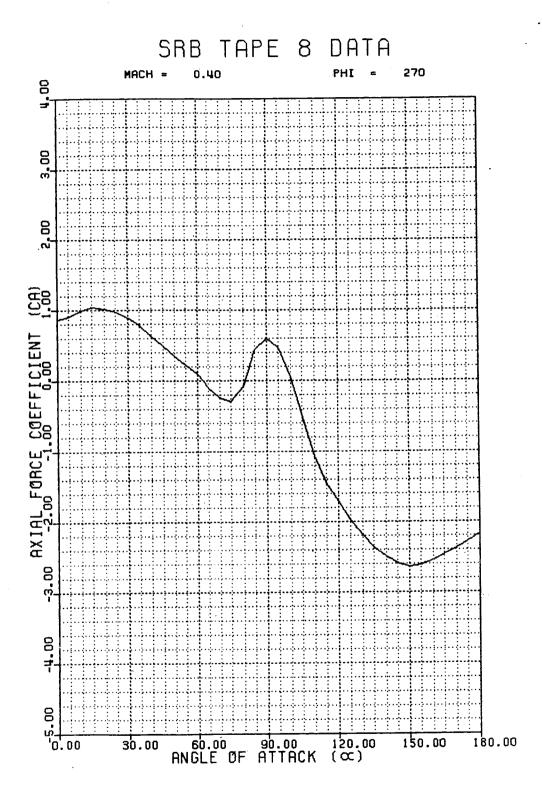


B-581

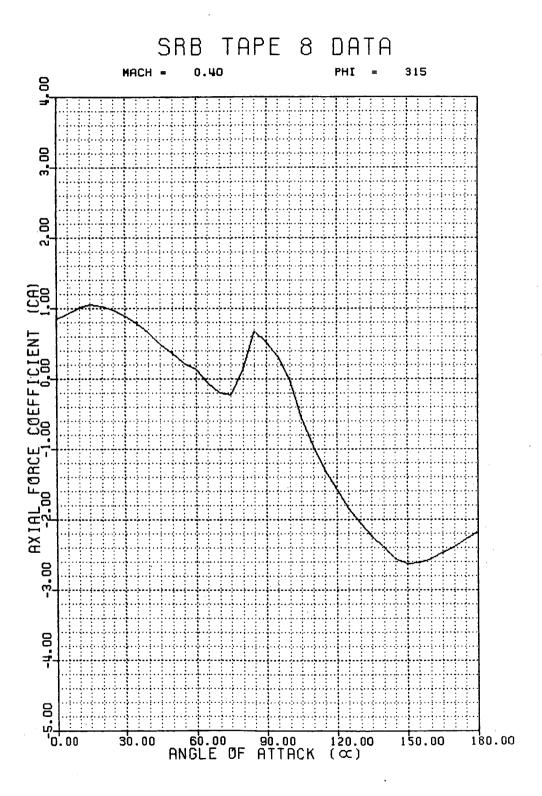
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-582

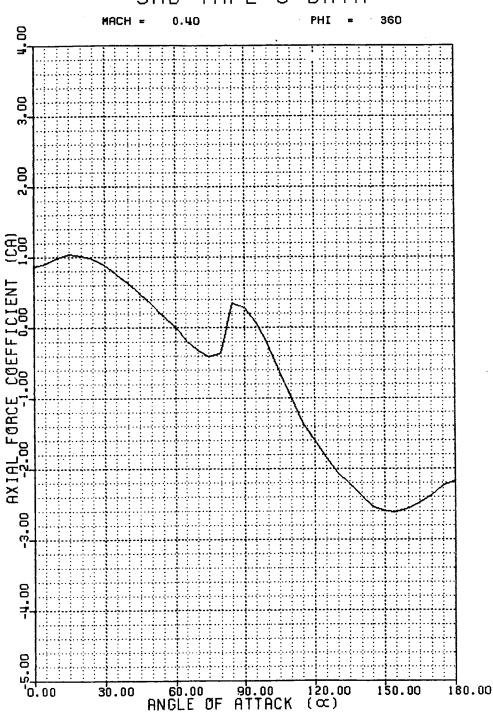


B-583
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

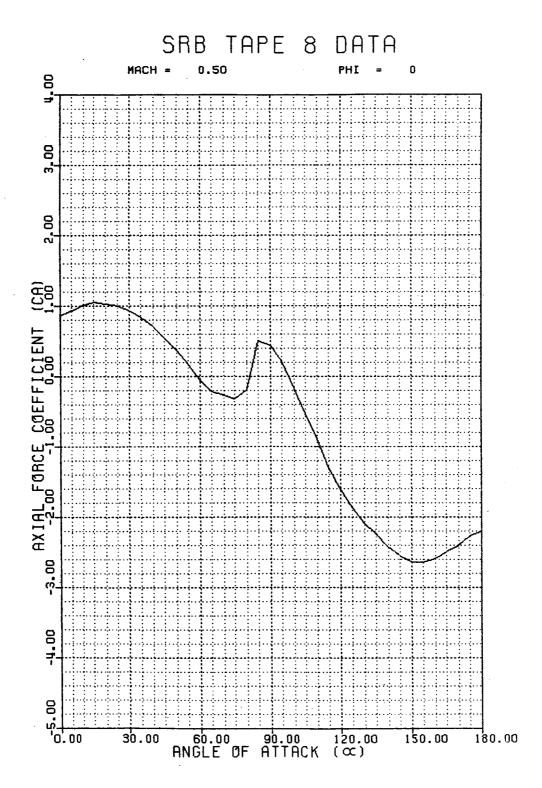


B-584
LÖCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA

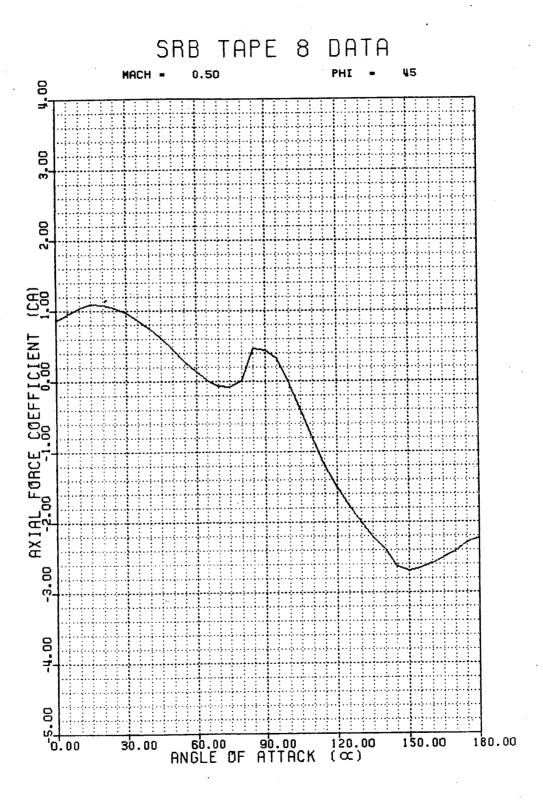


B-585



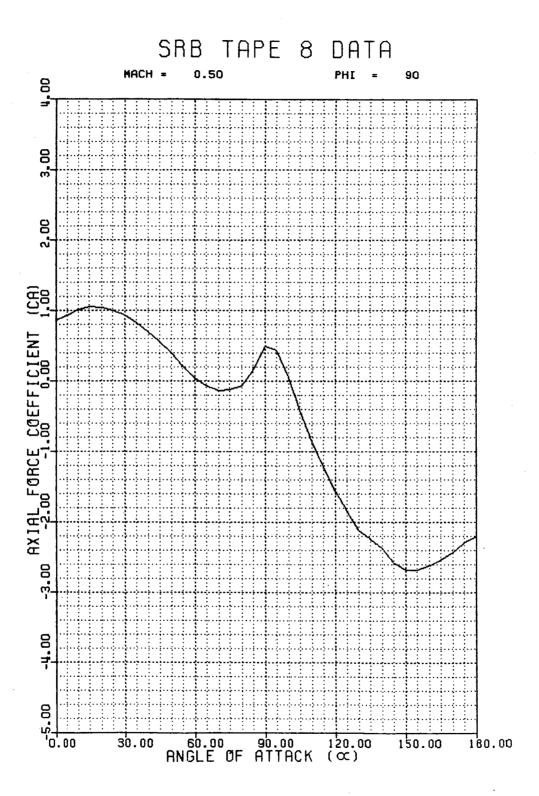
B-586

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

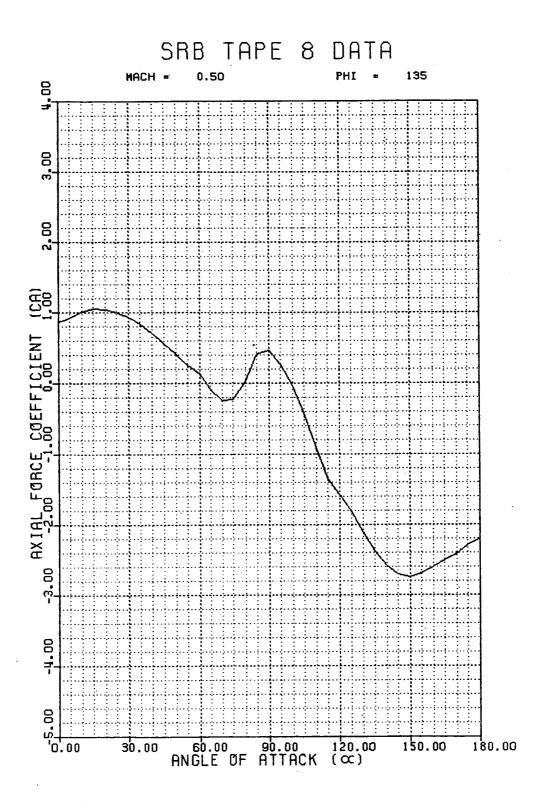


B-587 .

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

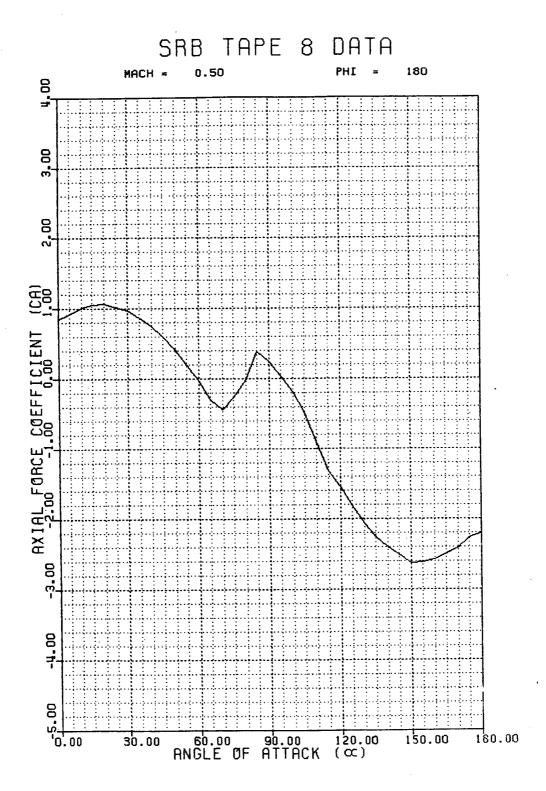


B-588
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

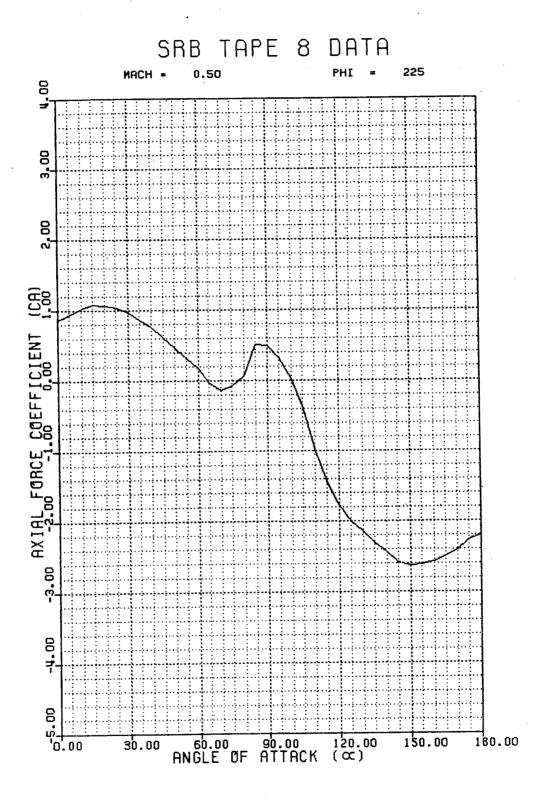


B-589

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

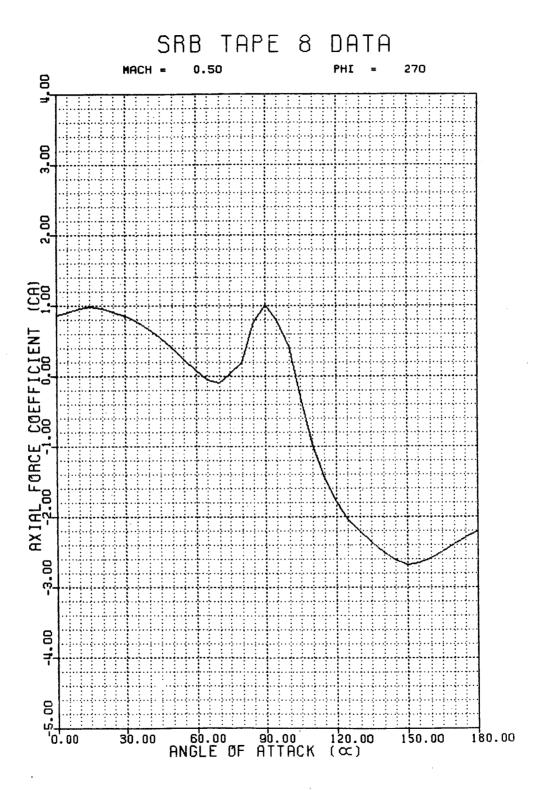


B-590
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

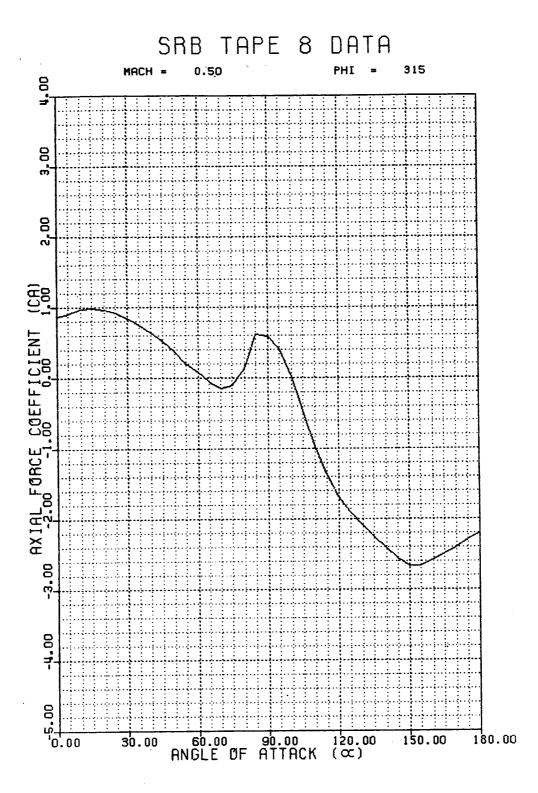


B-591

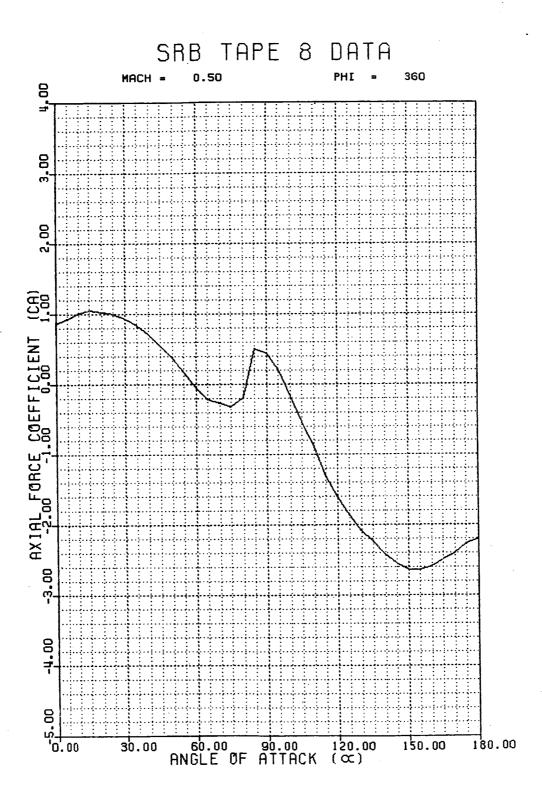
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-592
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



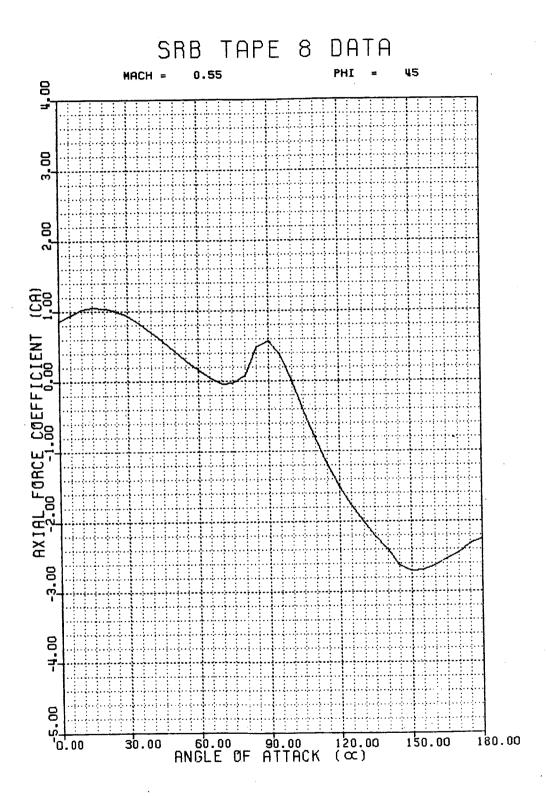
B-593
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



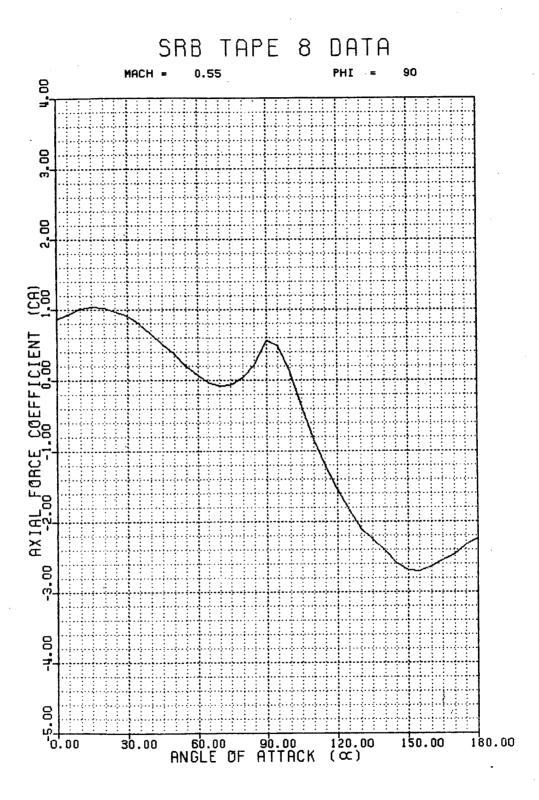
B-594
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 3,00 2,00 AXIAL FORCE COEFFICIENT -3.00 -u-00 0.00 60.00 90.00 ANGLE OF ATTACK 180.00 150.00 30.00

B-595
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-596
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

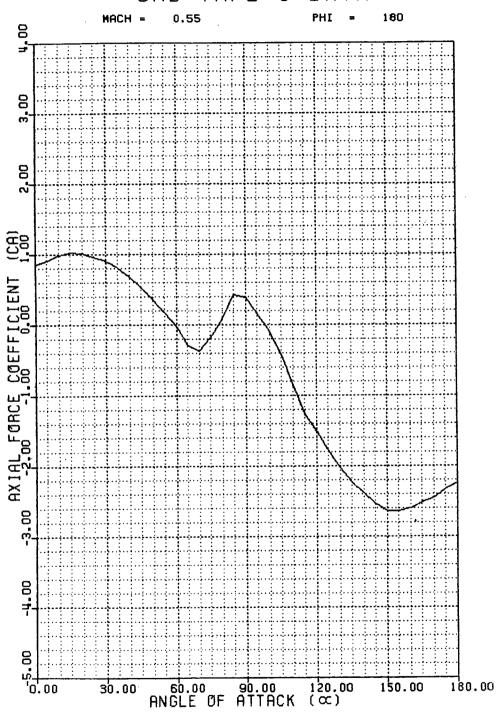


B-597
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

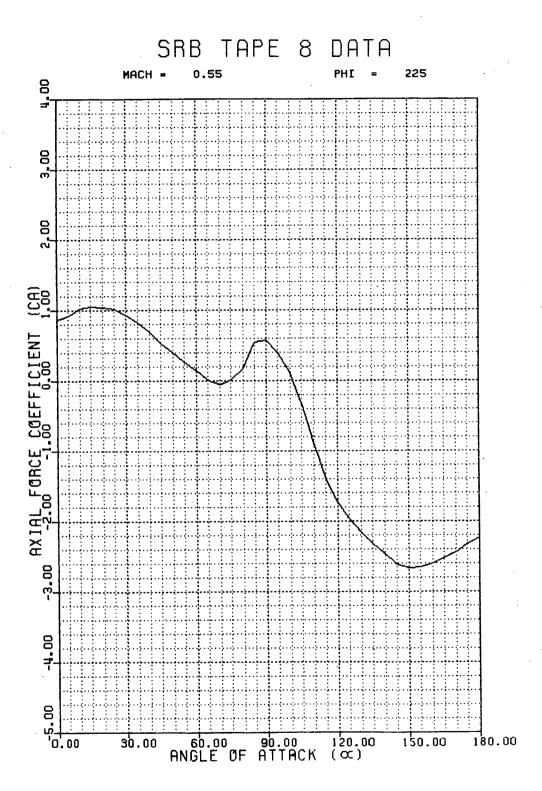
SRB TAPE 8 DATA 135 AXIAL FORCE COEFFICIENT 60.00 90.00 120.00 ANGLE UF ATTACK (∝) 180.00 30.00 150.00

B-598

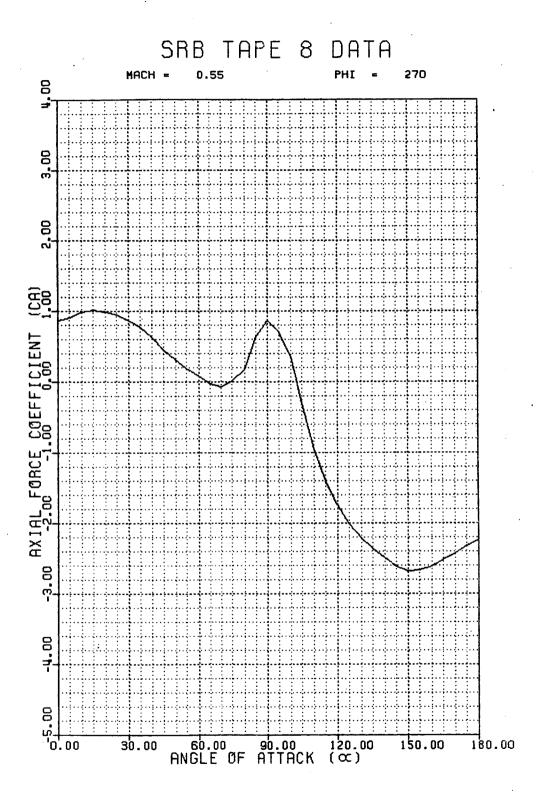
SRB TAPE 8 DATA



B-599

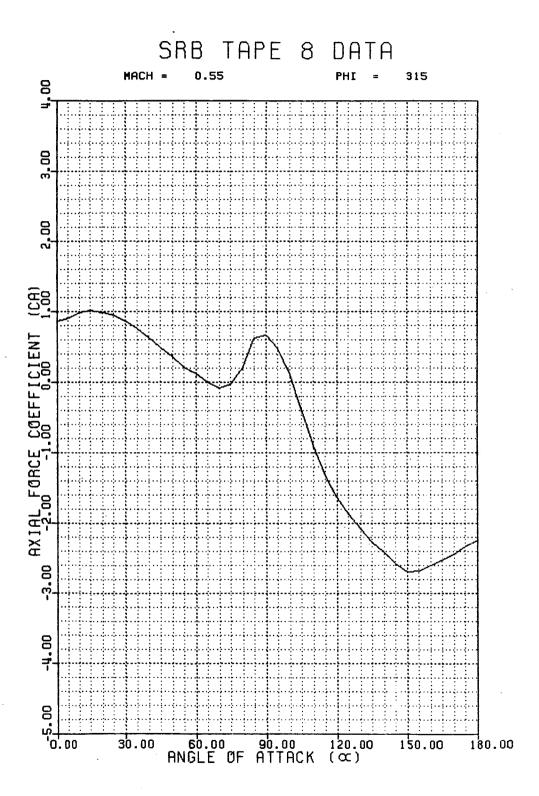


B-600



B-601

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

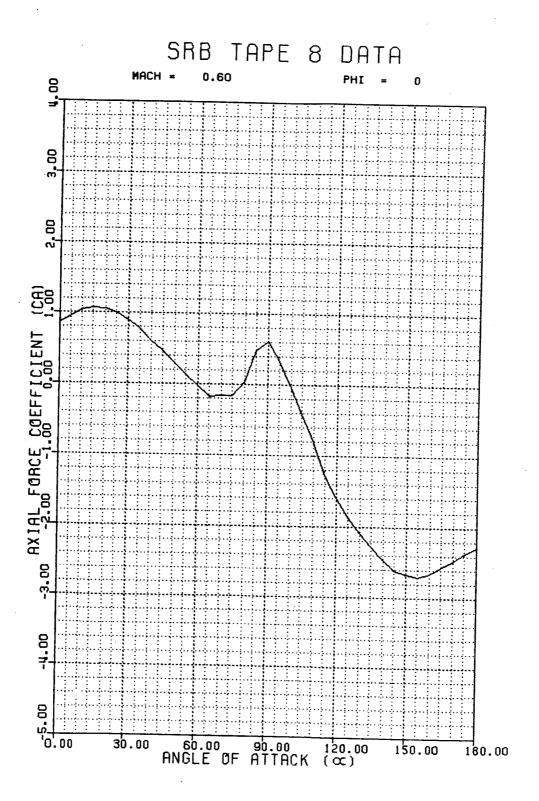


B-602

SRB TAPE 8 DATA 360 £,00 3,00 2,00 AXIAL FORCE COEFFICIENT -3.00 -u. 00 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 150.00 180.00

B-603

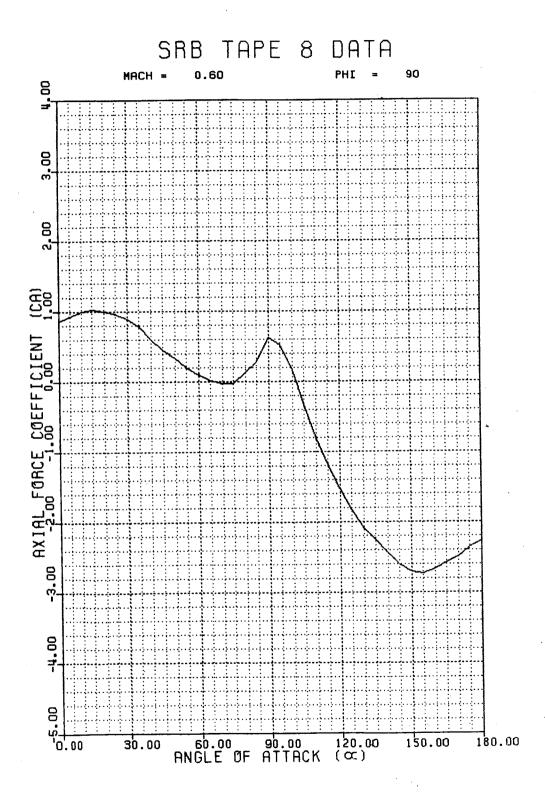
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-604

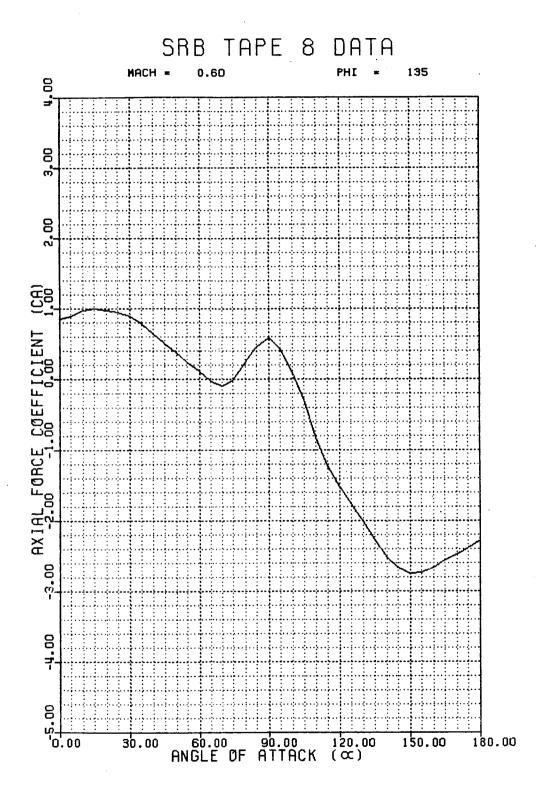
SRB TAPE 8 DATA 3,00 2,00 AXIAL FORCE COEFFICIENT -3.00 -u-00 0.00 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 180.00

B-605
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



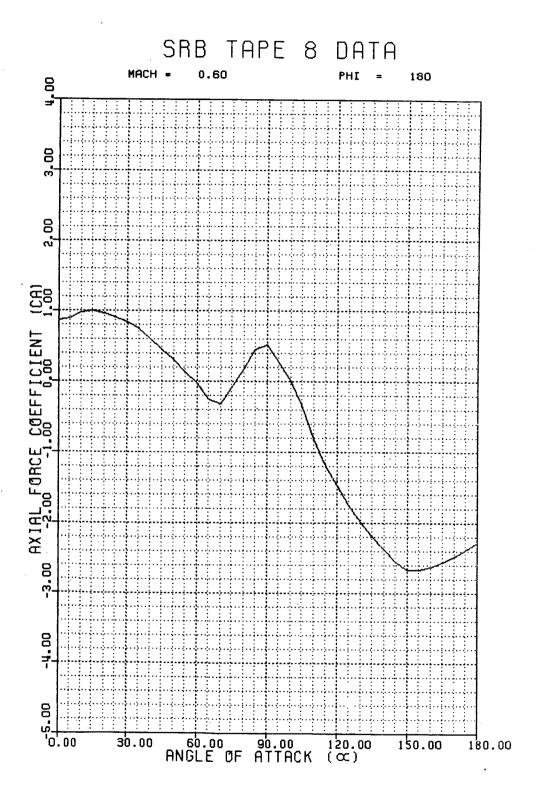
B-606

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

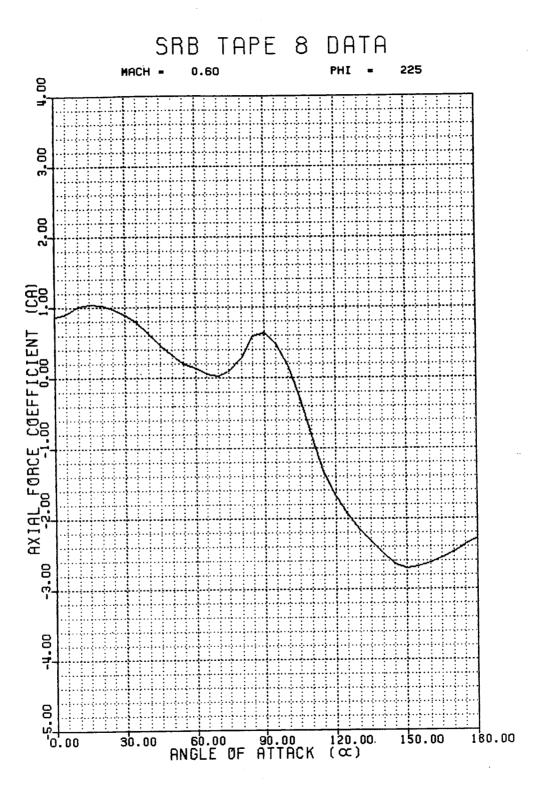


B-607

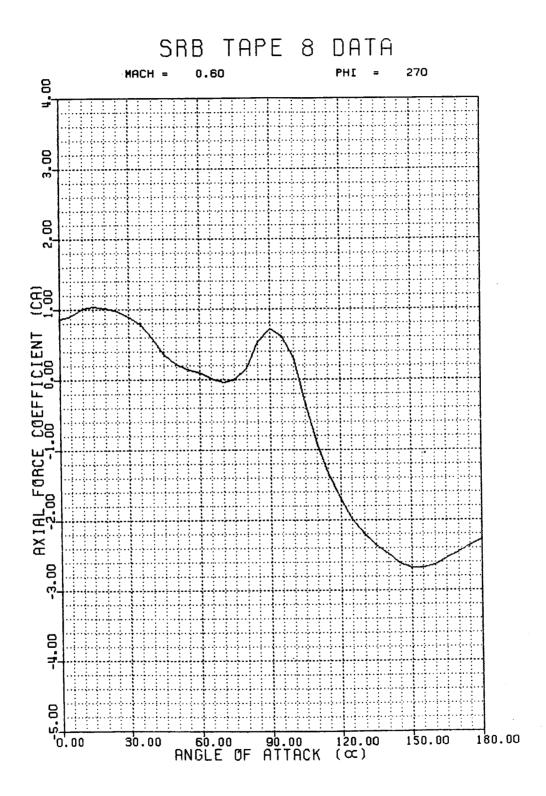
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-608

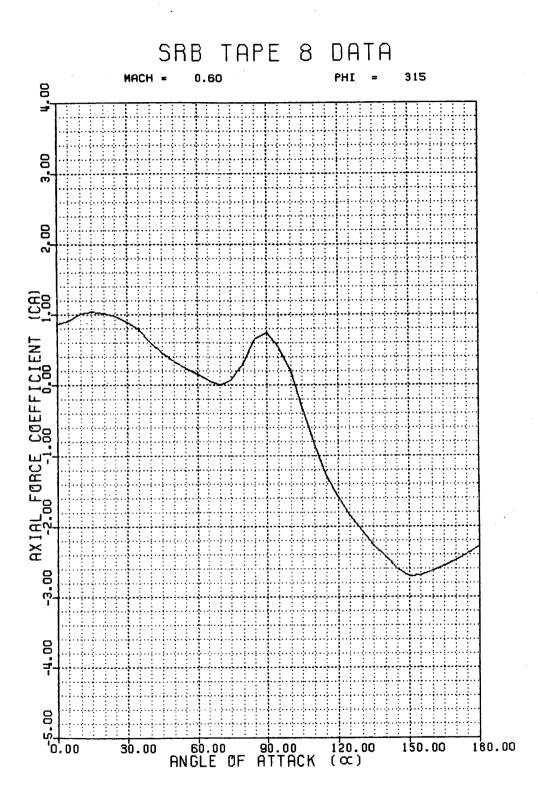


B-609
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

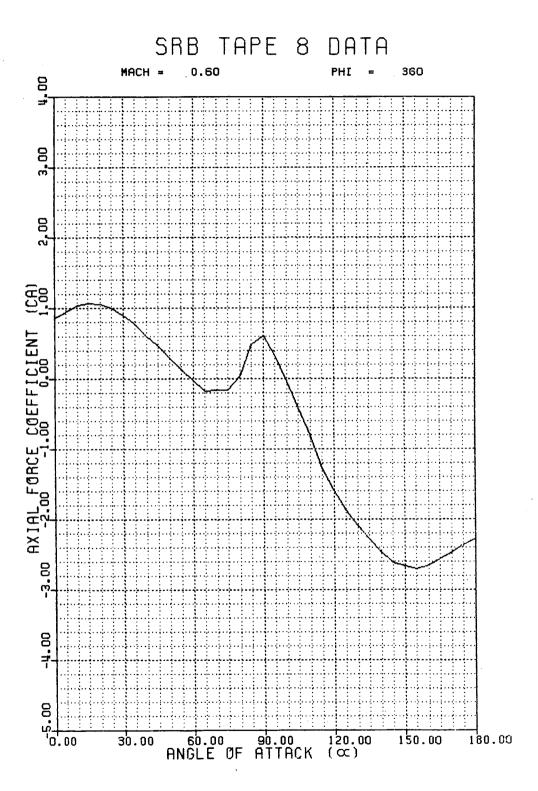


B-610

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

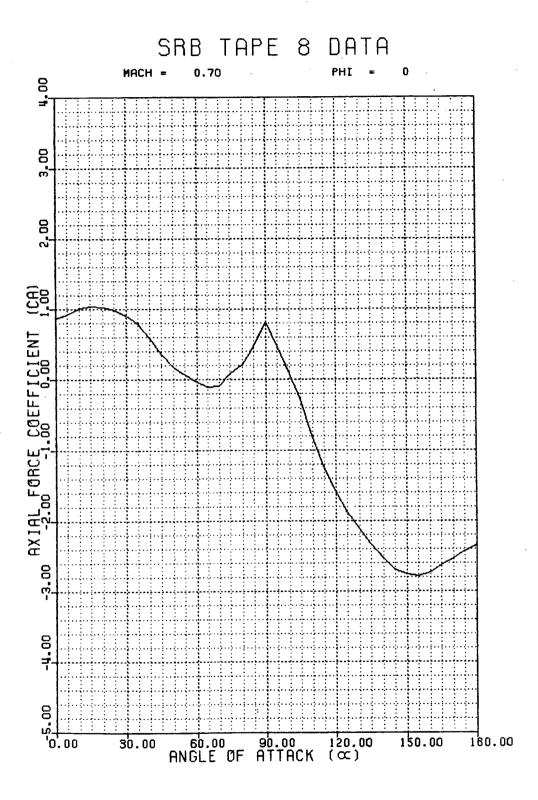


B-611
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

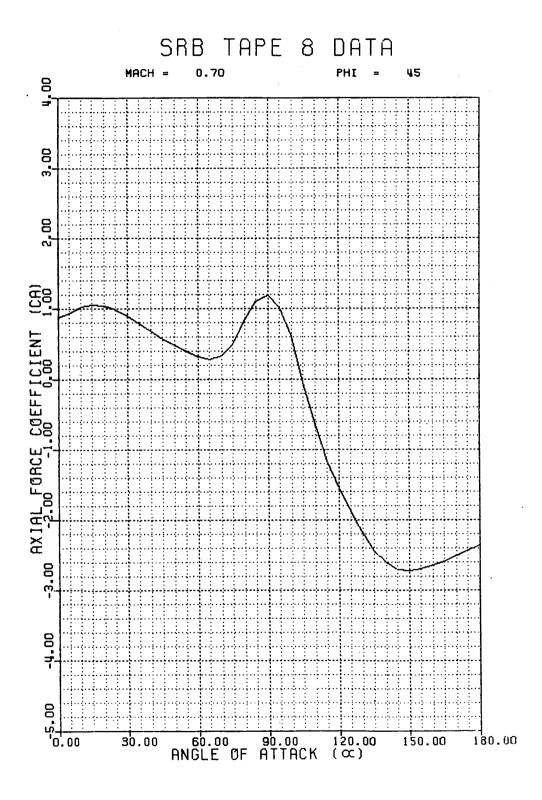


B-612

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

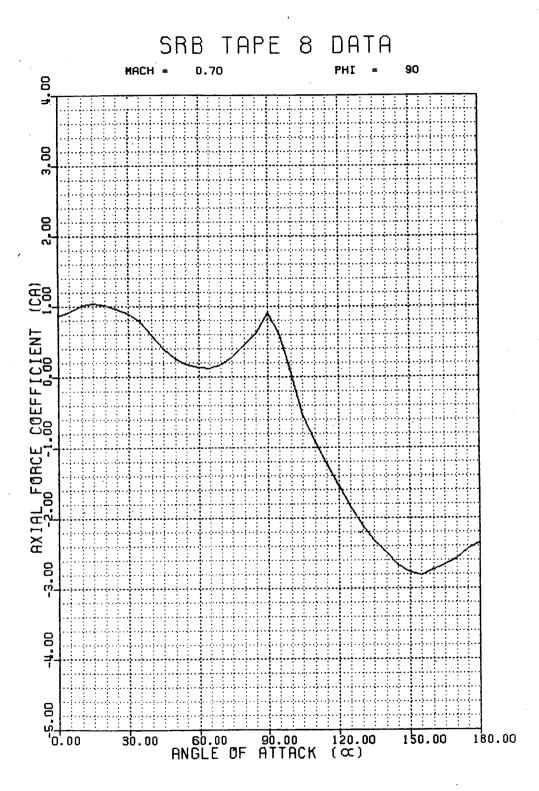


B-613
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

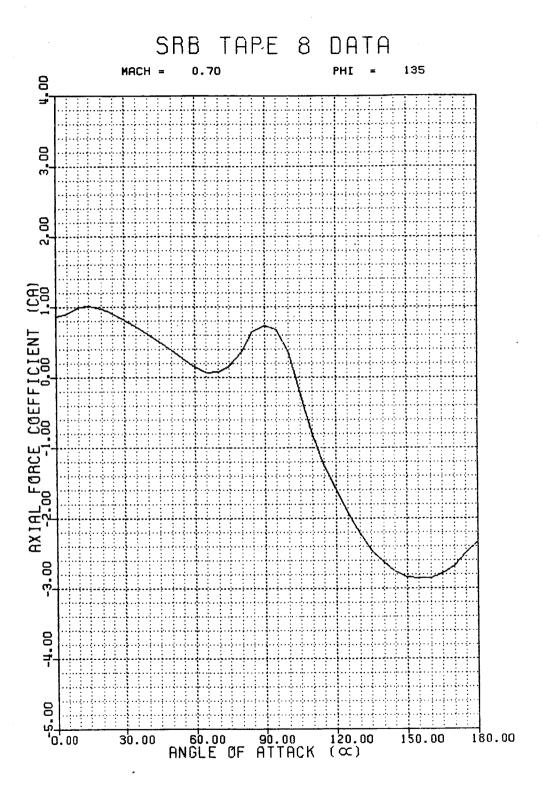


B-614

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

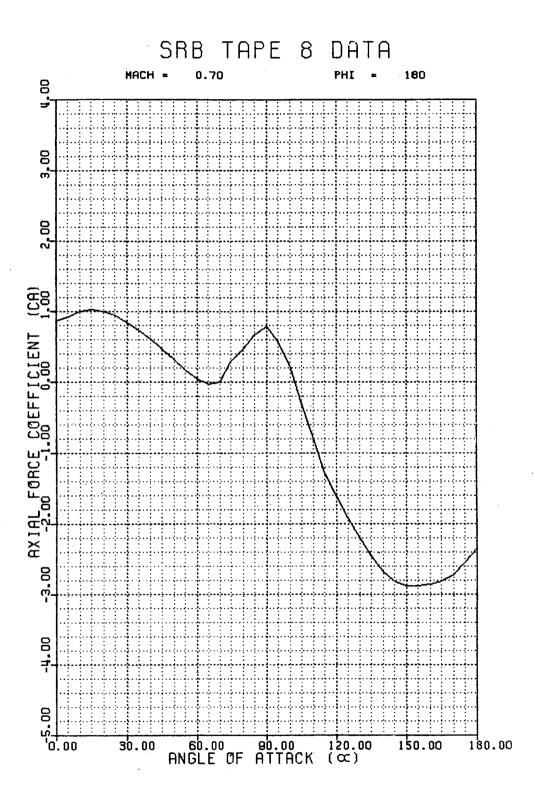


B-615
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



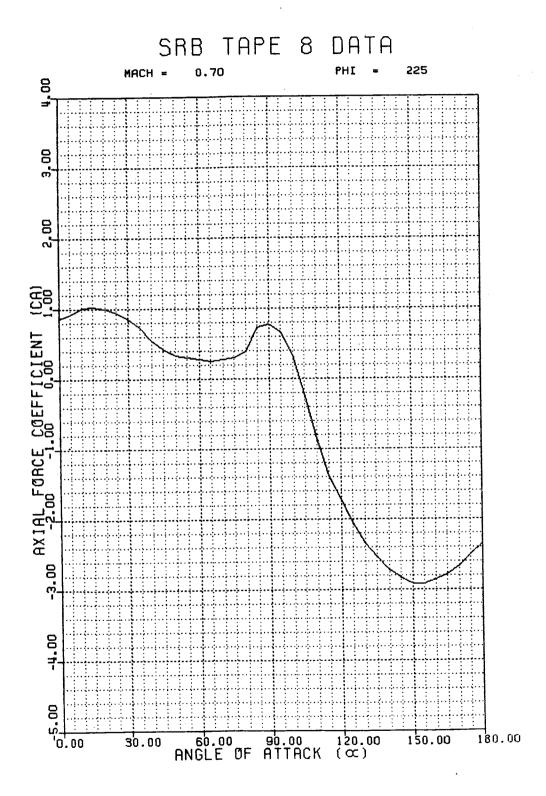
B-616

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



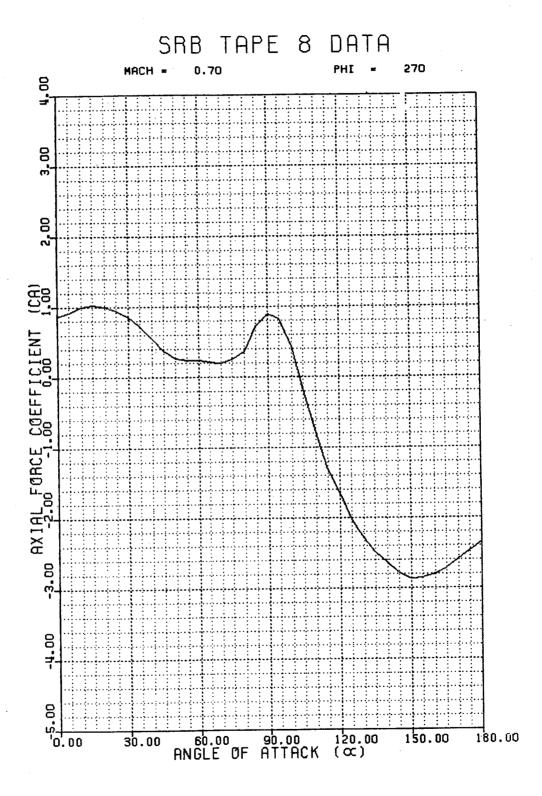
B-617

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

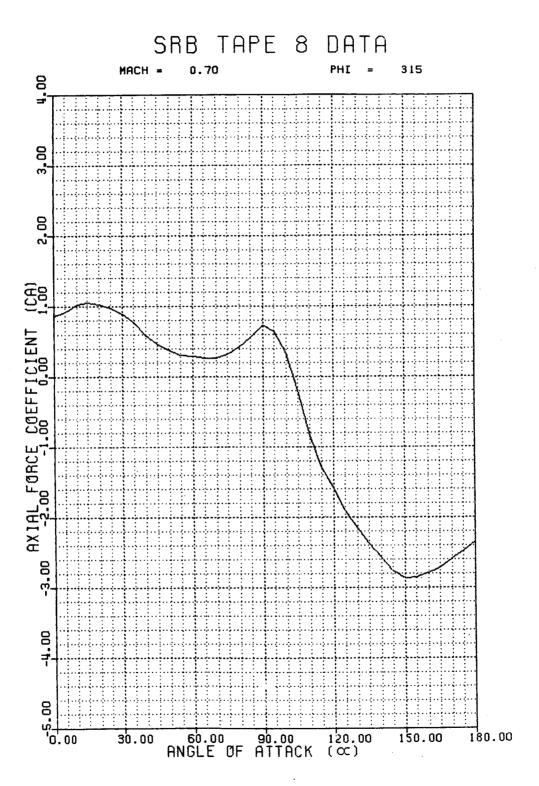


B-618

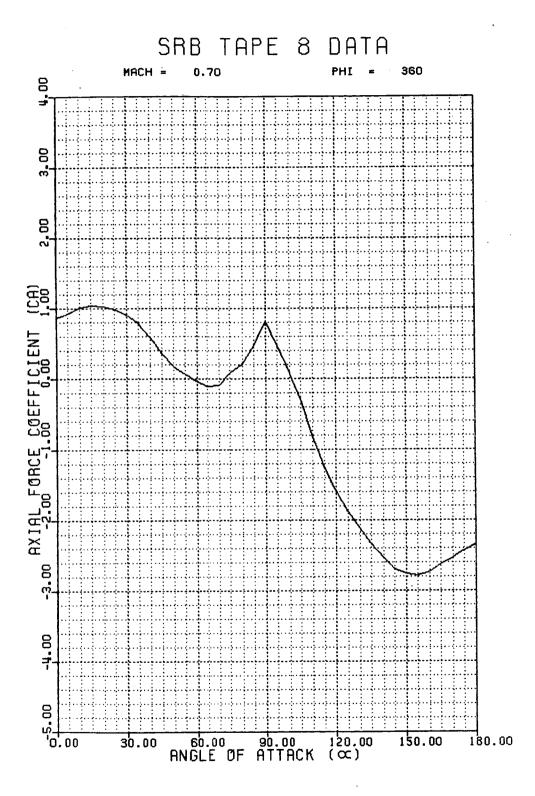
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



B-619
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

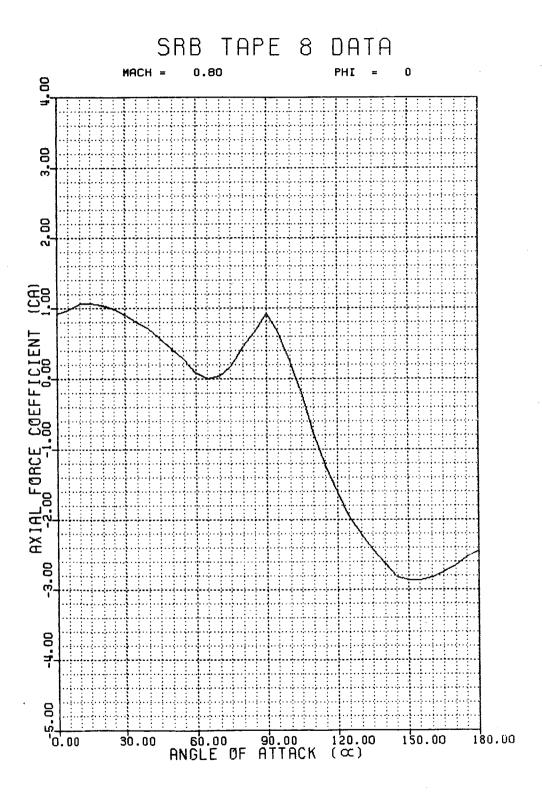


B-620



B-621

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-622
LOCKHEED-HUNTSVILLE ÉNGINEERING CENTER

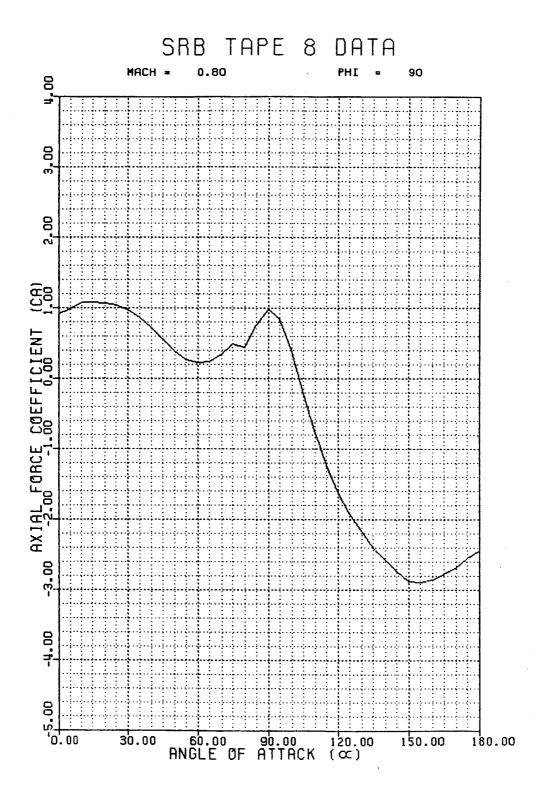
180.00

SRB TAPE 8 DATA 2,00 AXIAL FORCE COEFFICIENT -3.00 -u-00 0.00

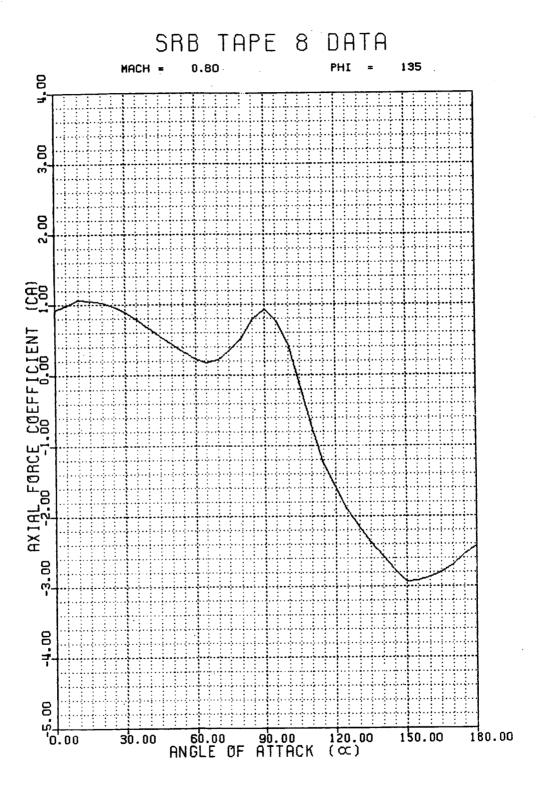
B-623

60.00 90.00 120.00 ANGLE OF ATTACK (∝)

30.00

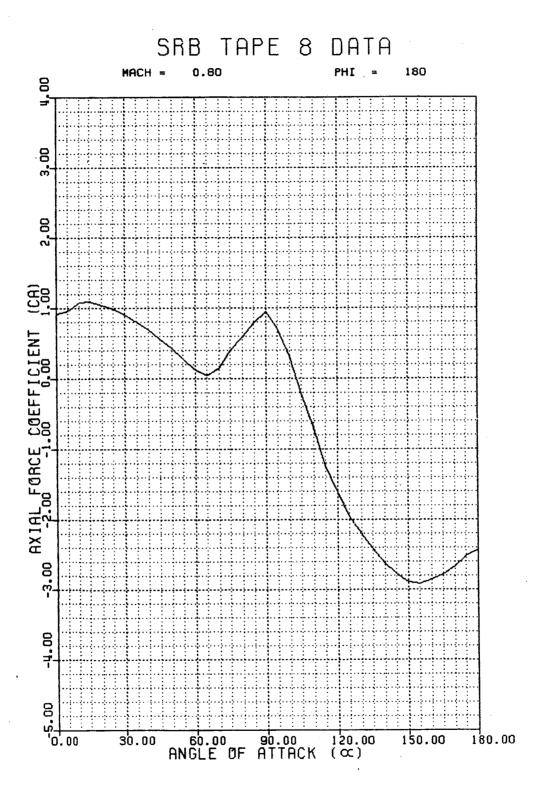


B-624
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



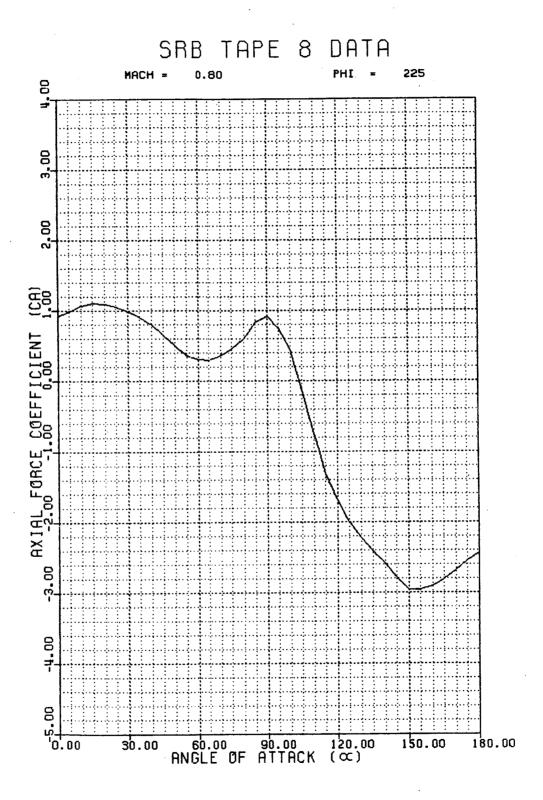
B-625

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

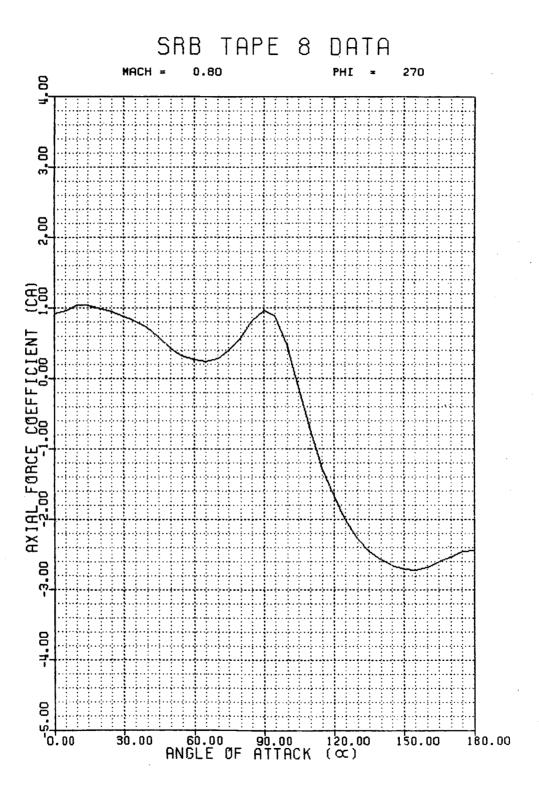


B-626

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

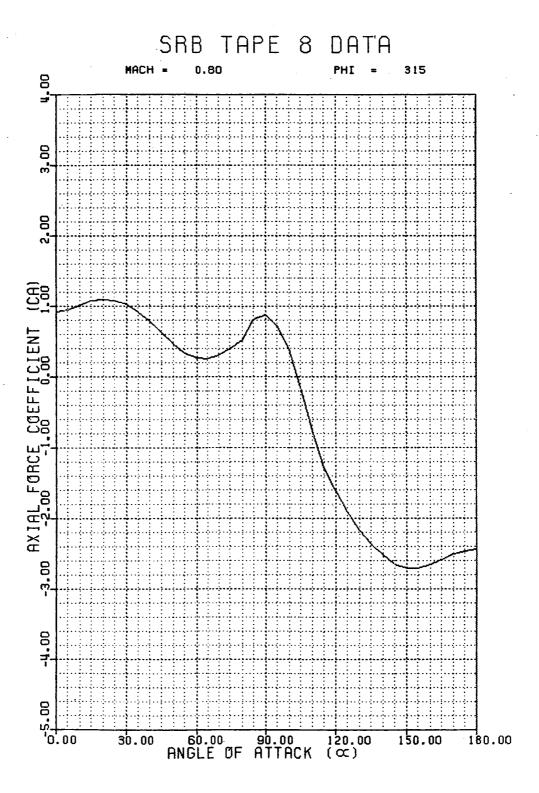


B-627
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

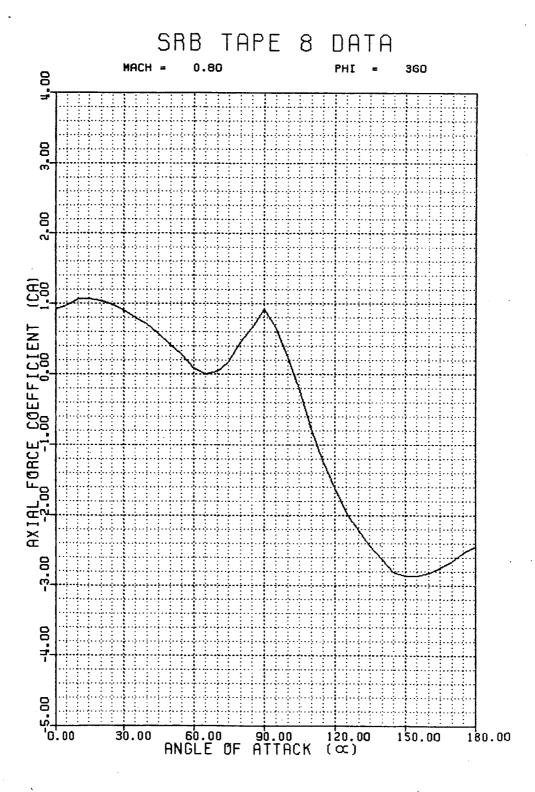


B-628

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



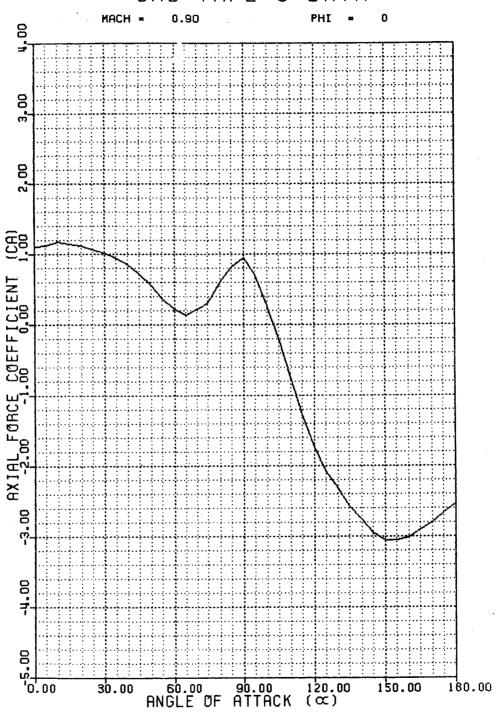
B-629
.
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



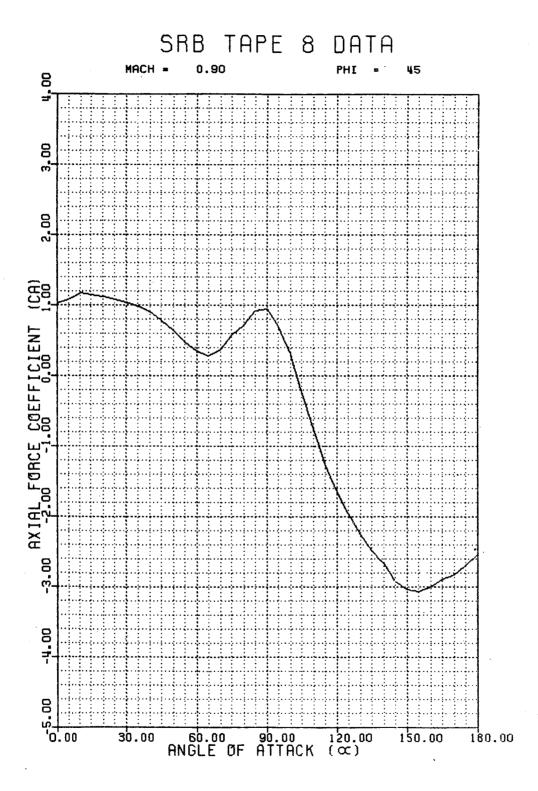
B-630

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

SRB TAPE 8 DATA

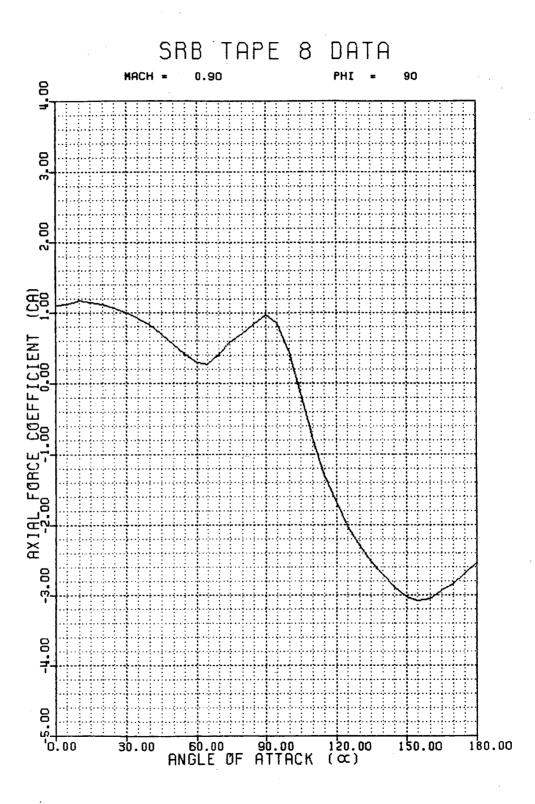


B-631

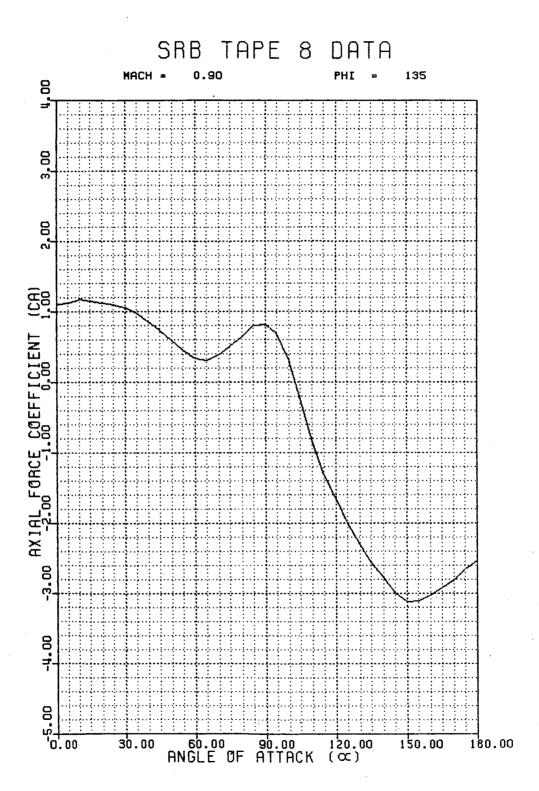


B-632

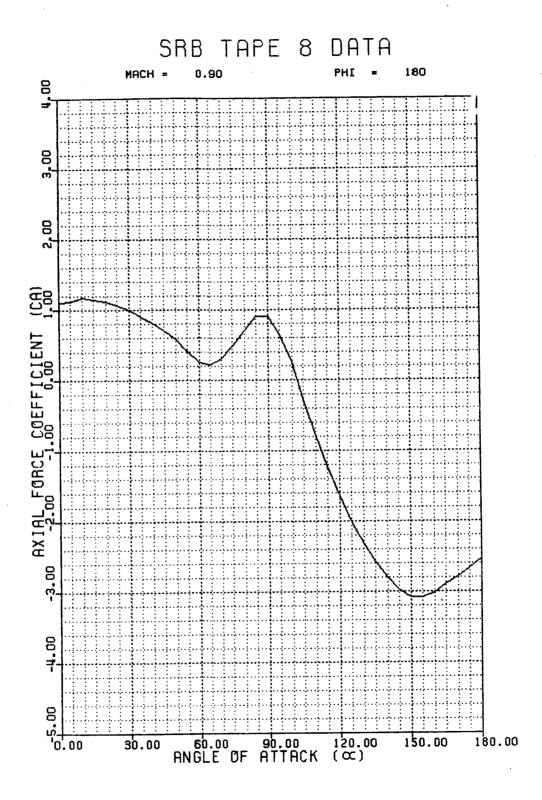
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



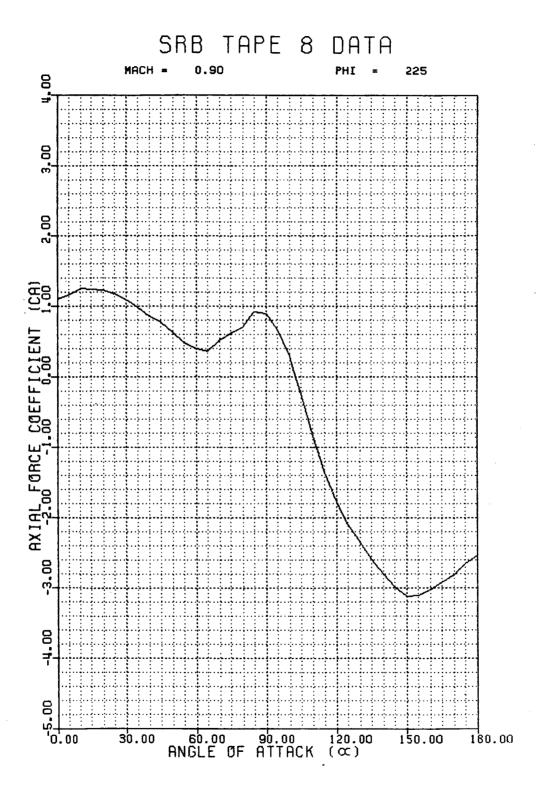
B-633
LOCKHEED-HUNTSYILLE ENGINEERING CENTER



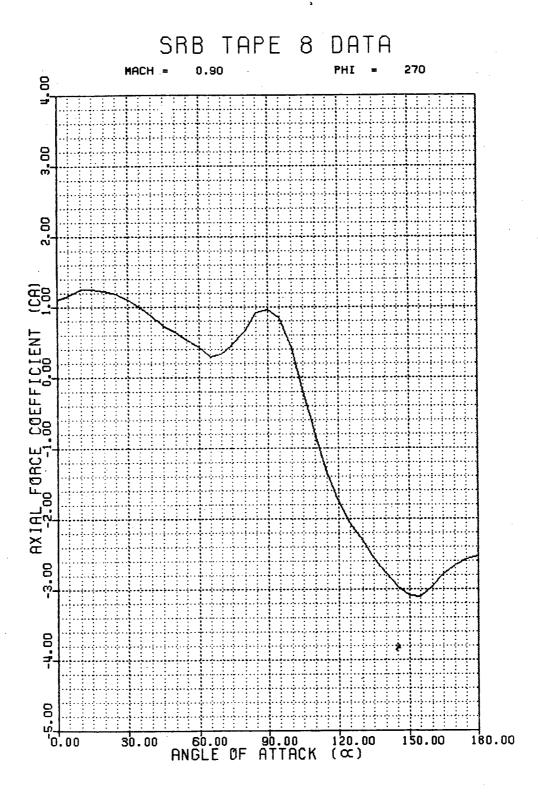
B-634
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-695
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

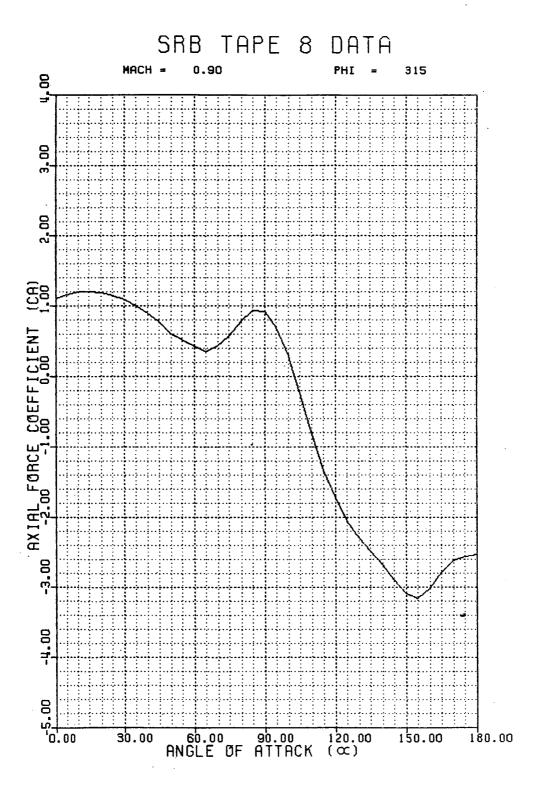


B-636



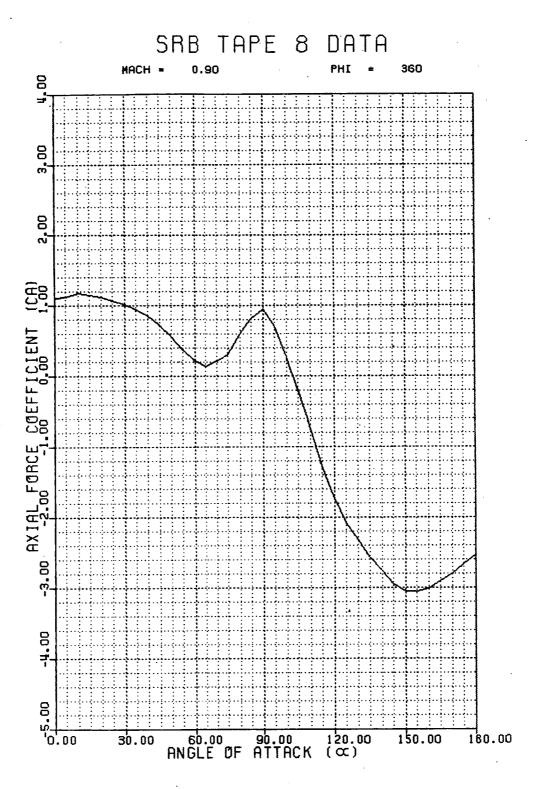
B-697

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

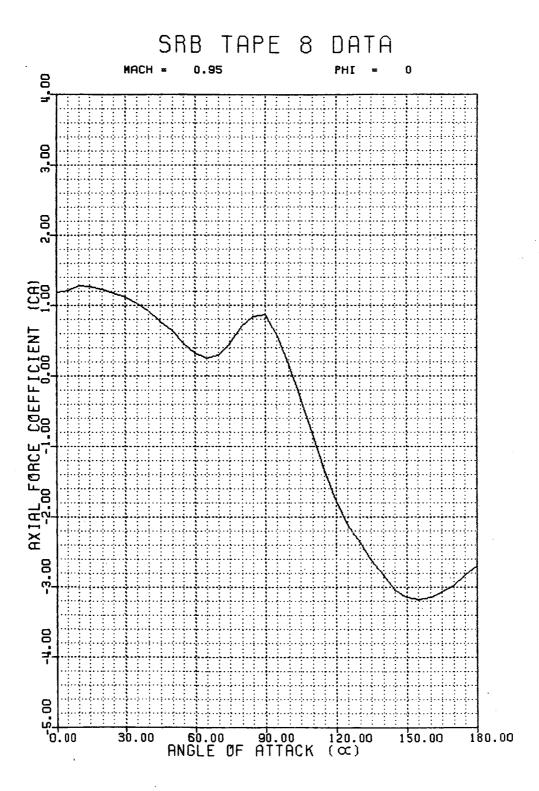


B-638

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

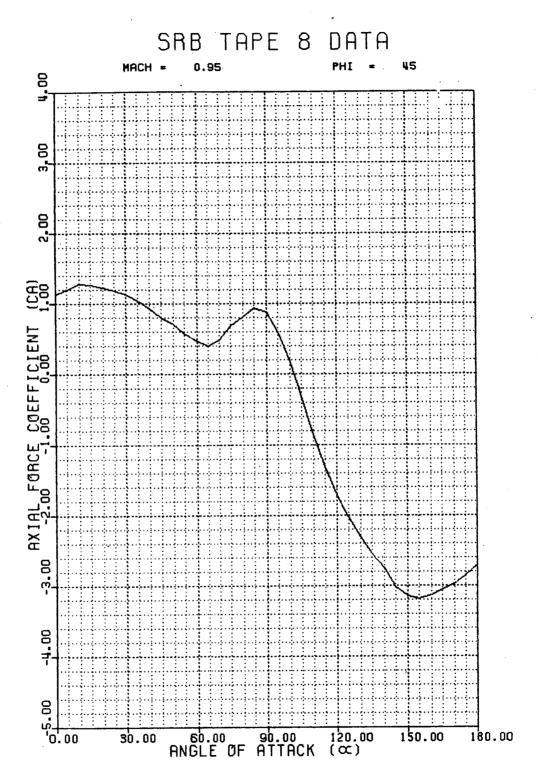


B-639
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

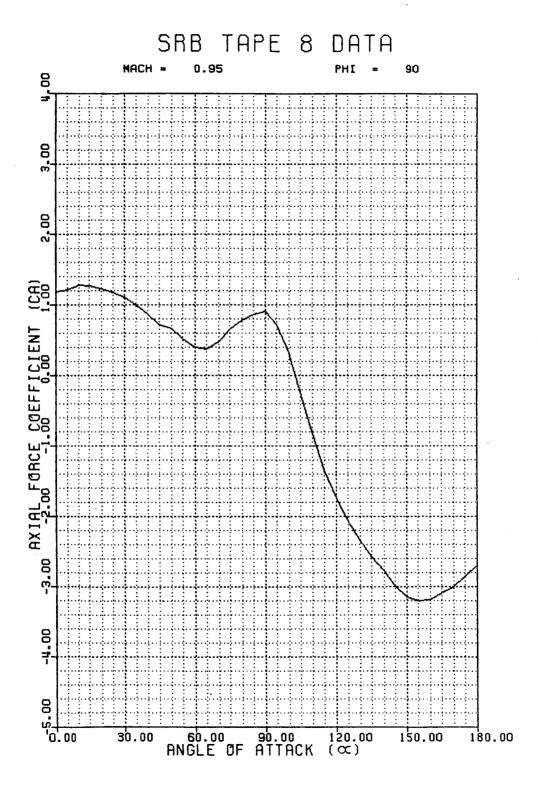


B-640

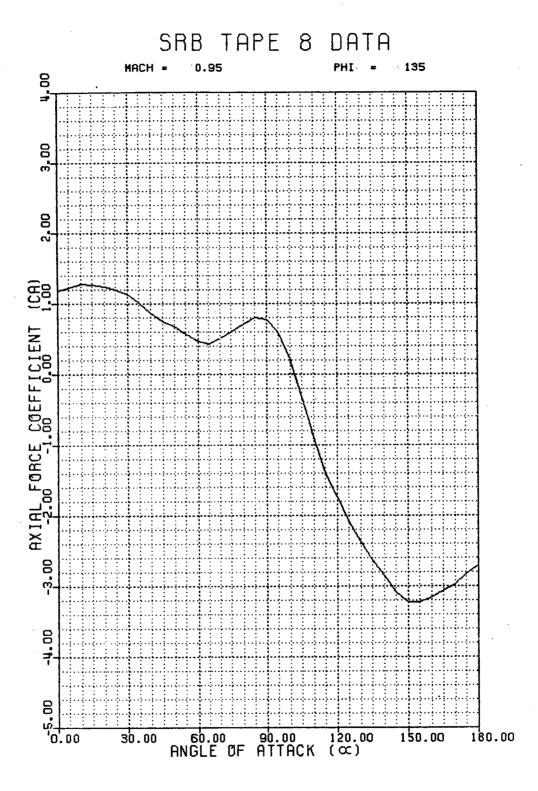
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



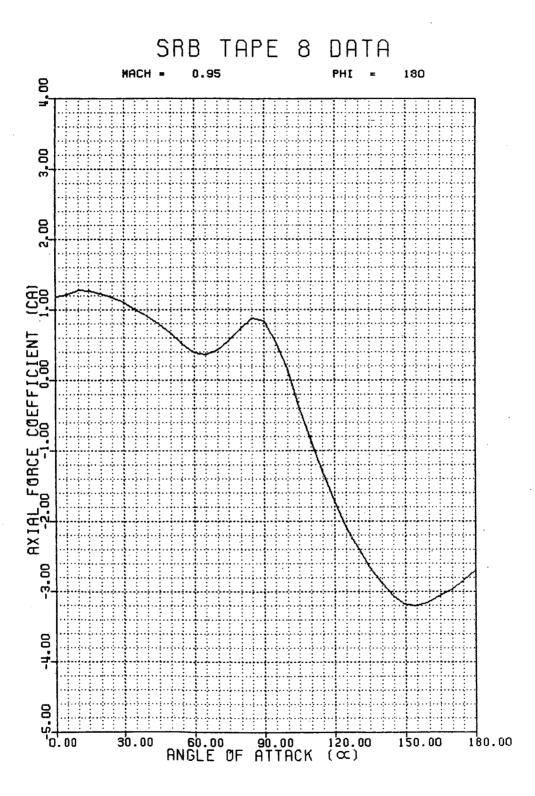
B-641
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



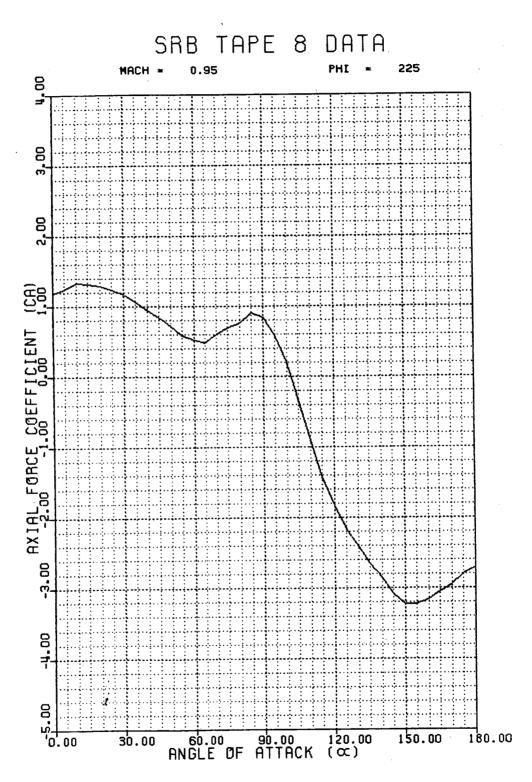
B-642
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



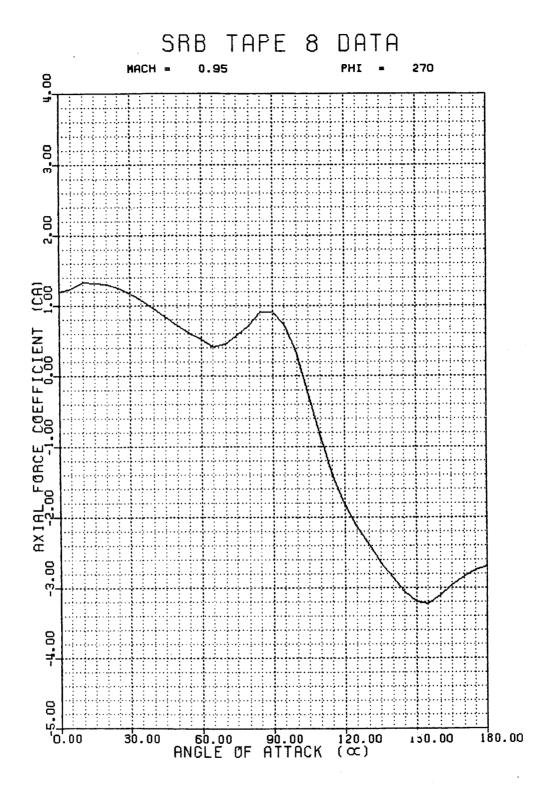
B-643
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-644

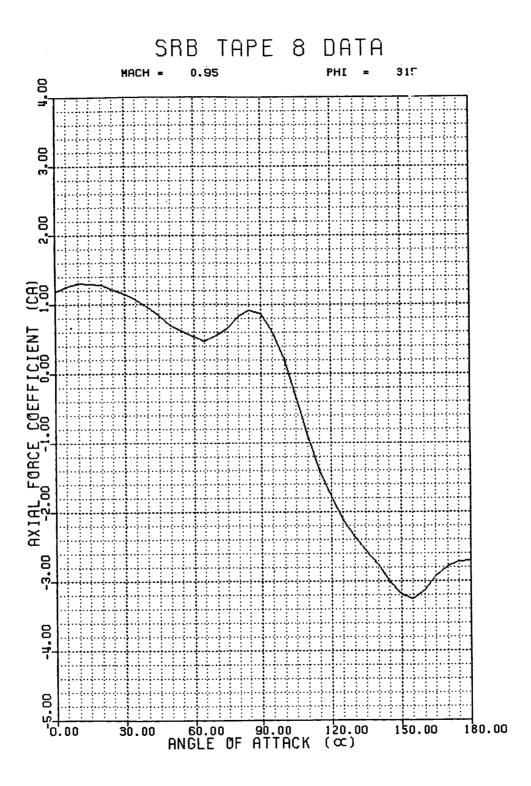


B-645
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



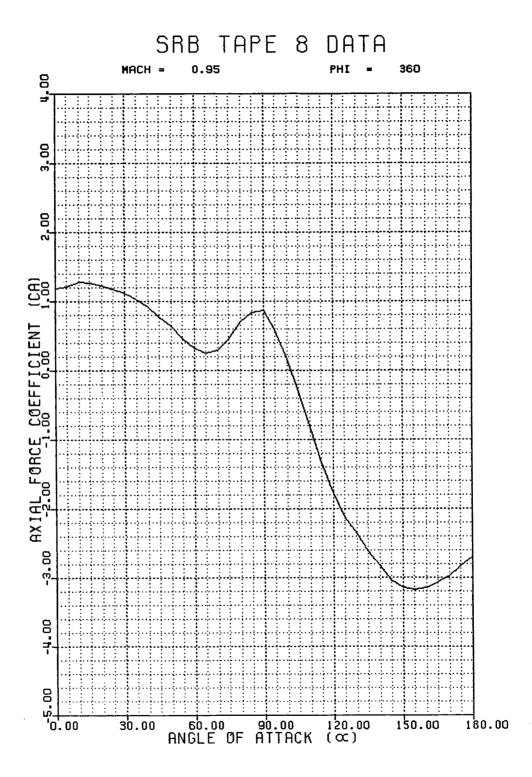
B-646

COCKHEED-HUNTSVILLE ENGINEERING CENTER



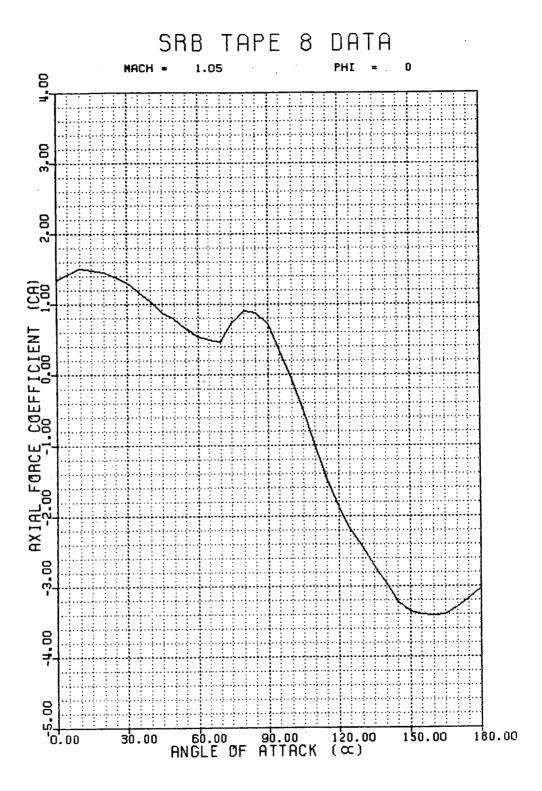
B-647

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



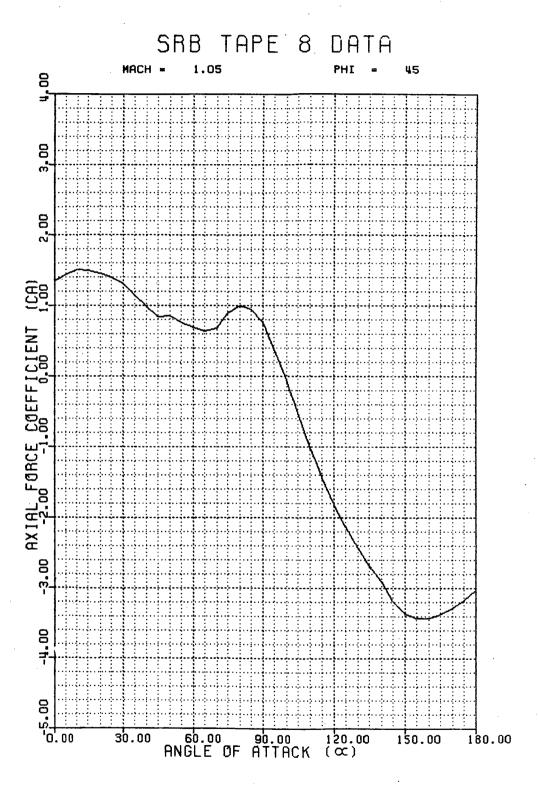
B-648

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



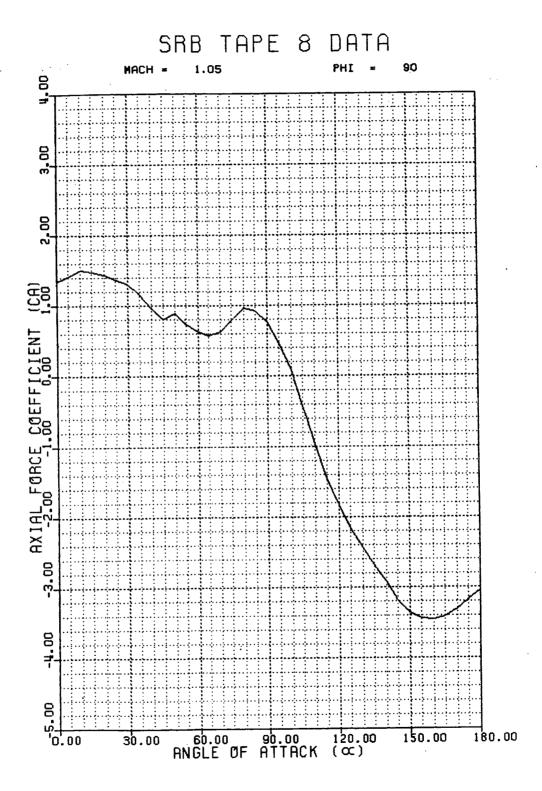
B-649

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



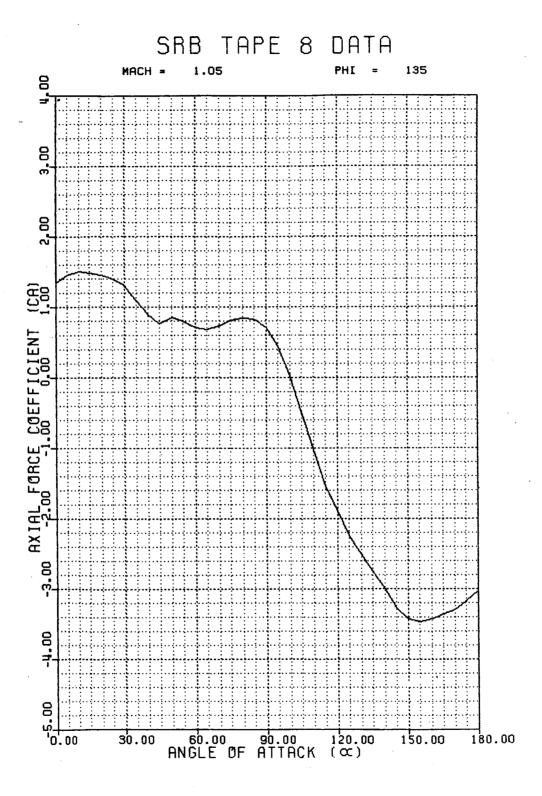
B-650

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



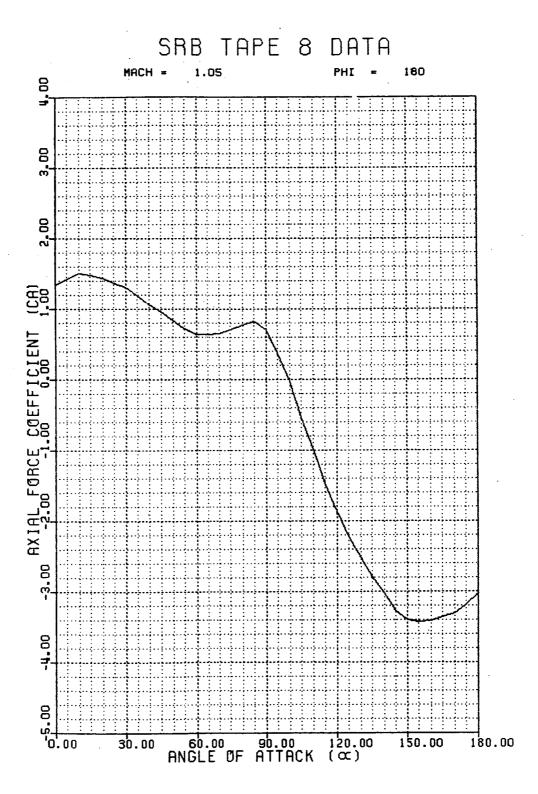
B-651

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

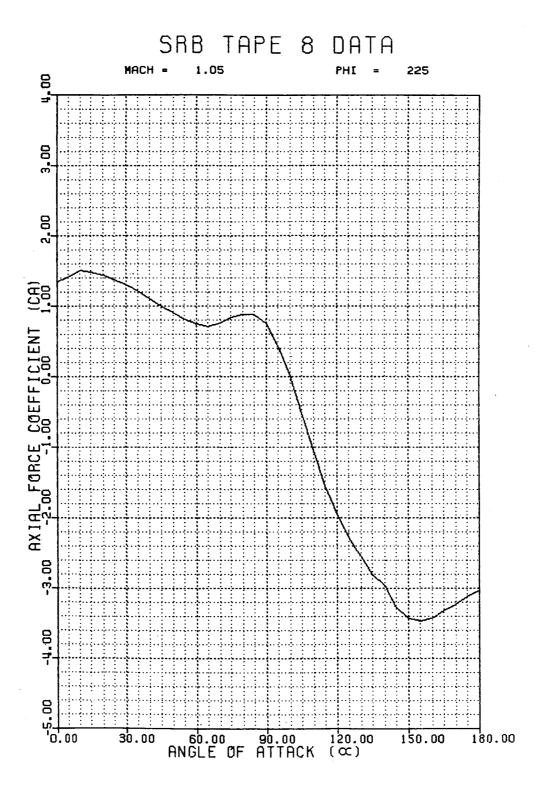


B-652

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-653
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-654

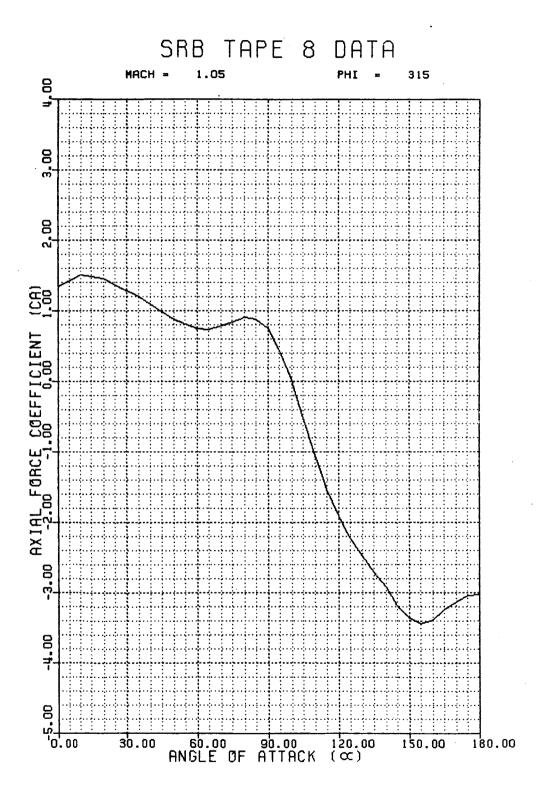
180.00

SRB TAPE 8 DATA 270 . 00° AXIAL FORCE

B-655
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

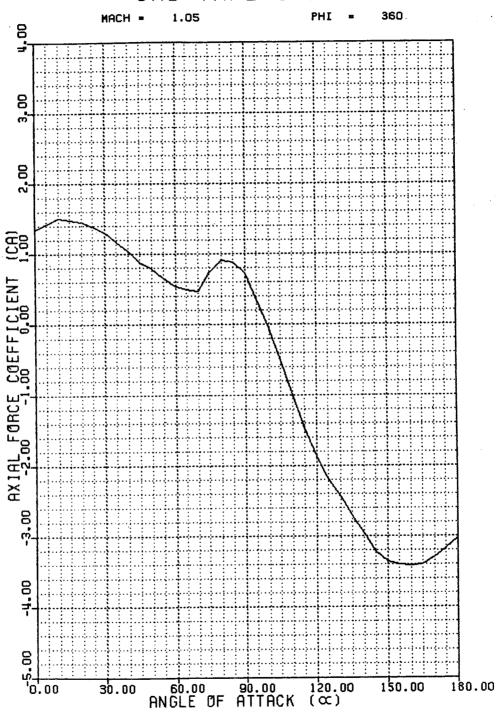
60.00 90.00 120.00 ANGLE OF ATTACK (∝)

2.00

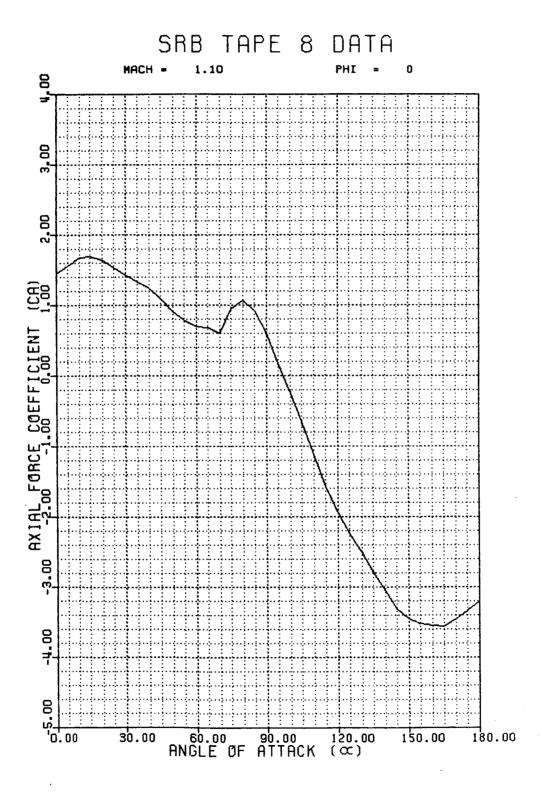


B-656

SRB TAPE 8 DATA



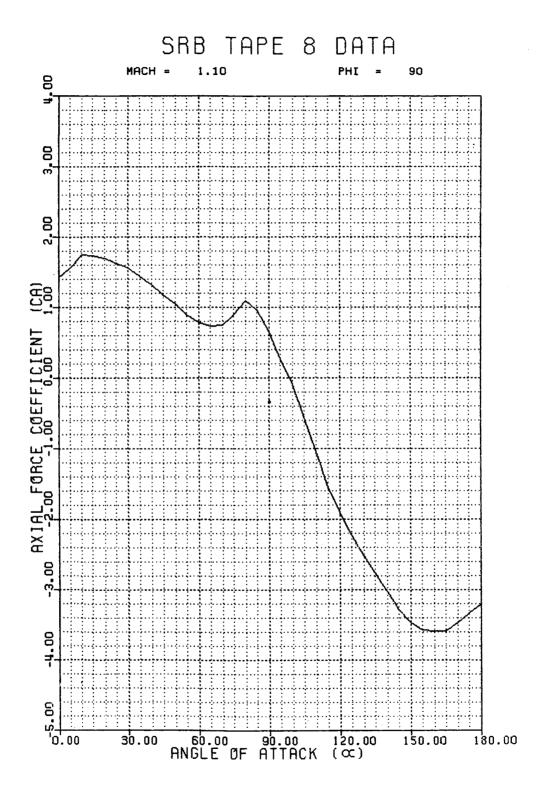
B-657



B-658
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 3.00 2,00 -3.00 AXIAL FORCE COEFFICIENT (CA) -u-00 0.00 60.00 90.00 ANGLE OF ATTACK 120.00 (∝) 150.00 180.00

B-659
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

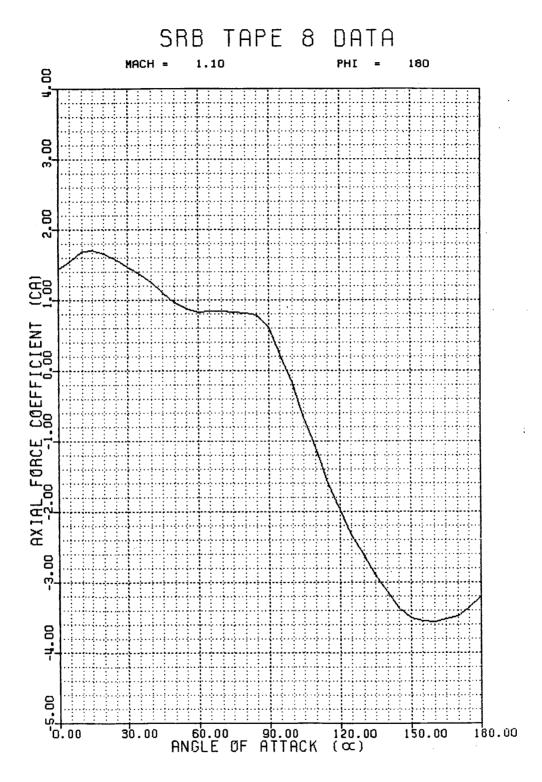


B-660

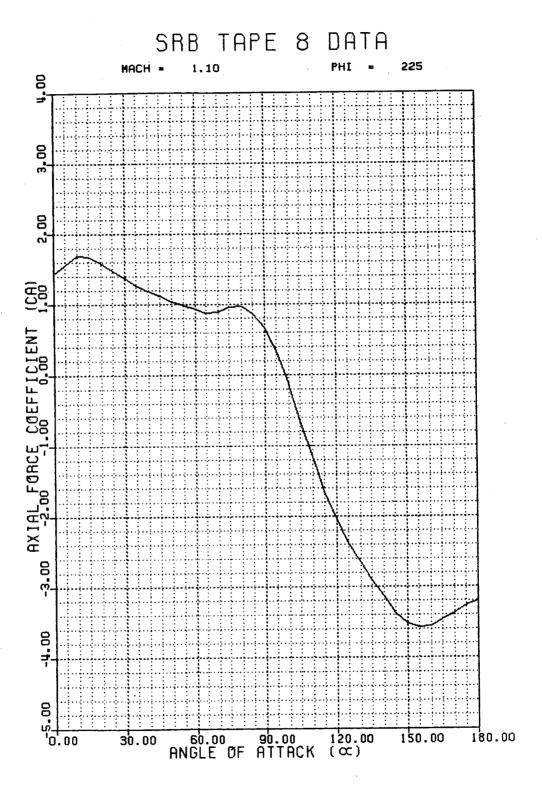
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 135 MACH = 3.00 2,00 AXIAL FORCE COEFFICIENT -3.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00 30.00

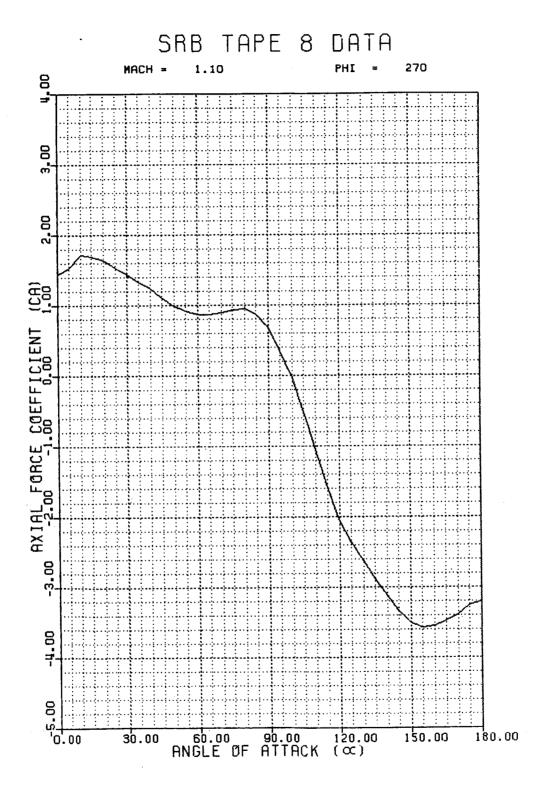
B-661



B-662
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

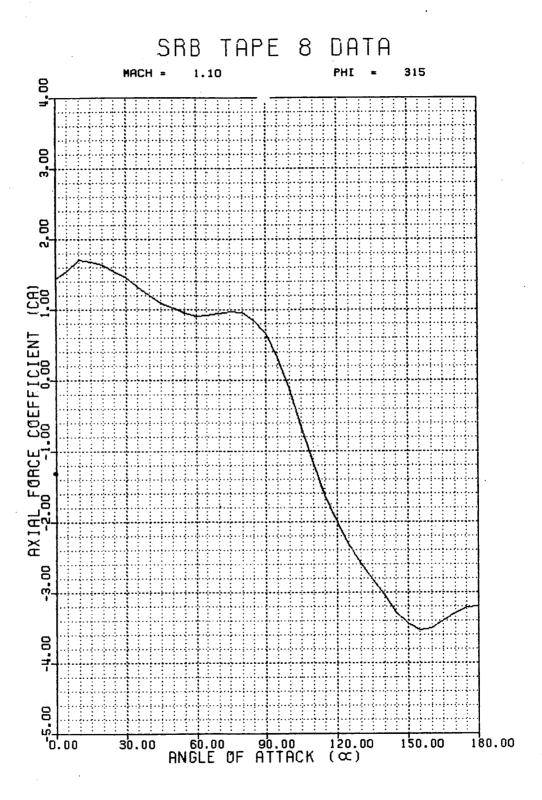


B-663
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

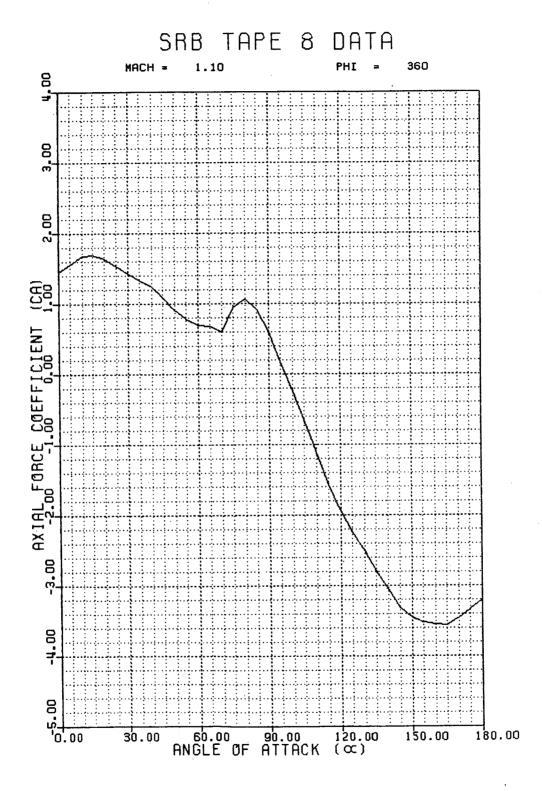


B-664

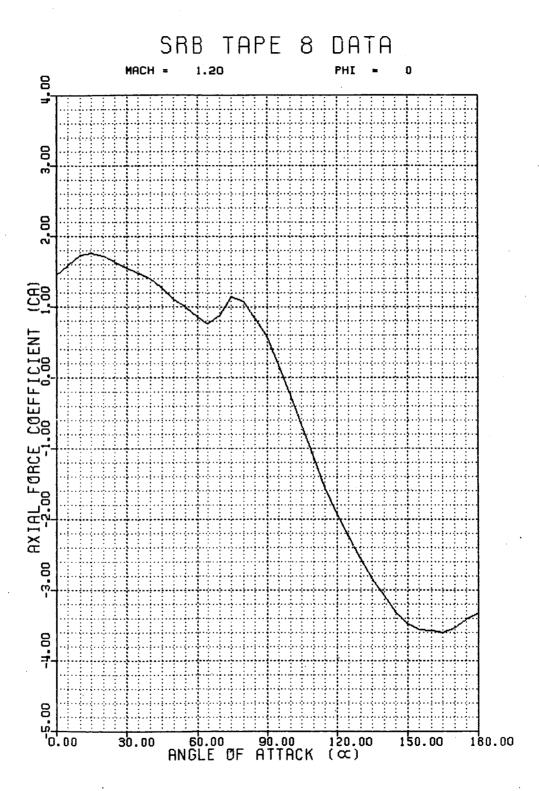
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-685



B-666
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-667

2.00

30.00

SRB TAPE 8 DATA 3,00 2,00 AXIAL FORCE COEFFICIENT -3.00 -H-00

B-668

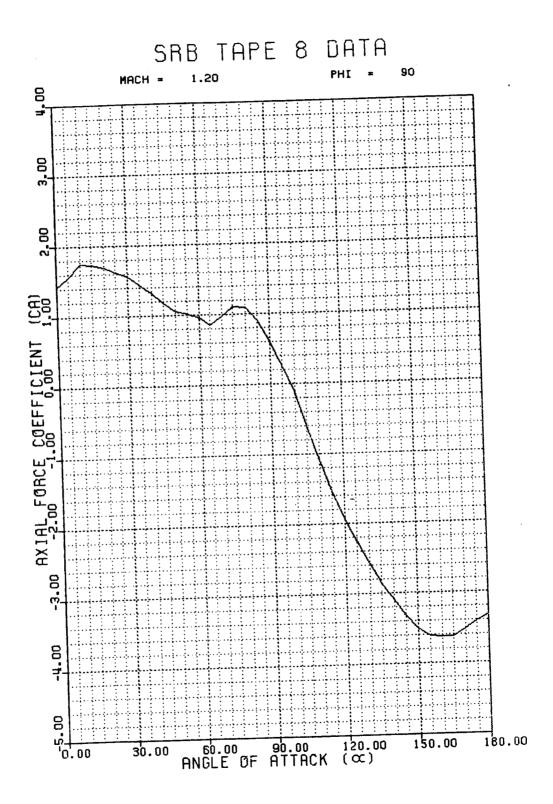
LOCKHEED-HUNTSYILLE ENGINEERING CENTER

120.00 (∝)

150.00

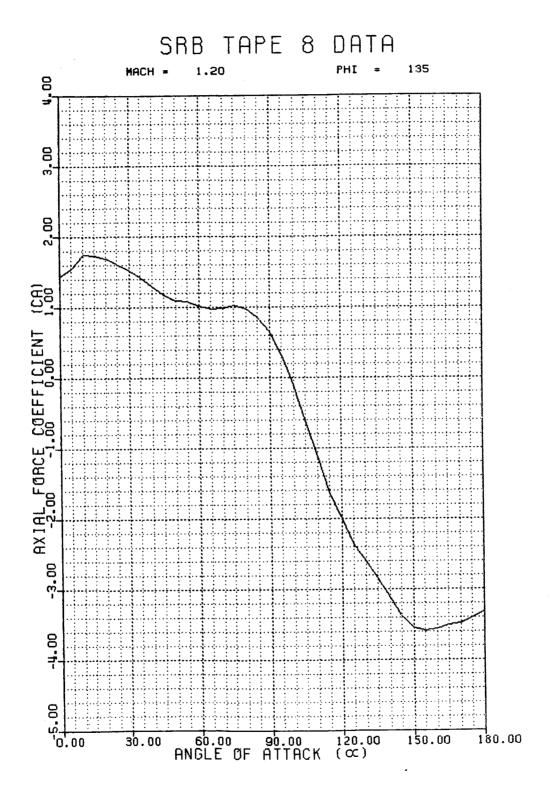
180.00

60.00 90.00 ANGLE OF ATTACK

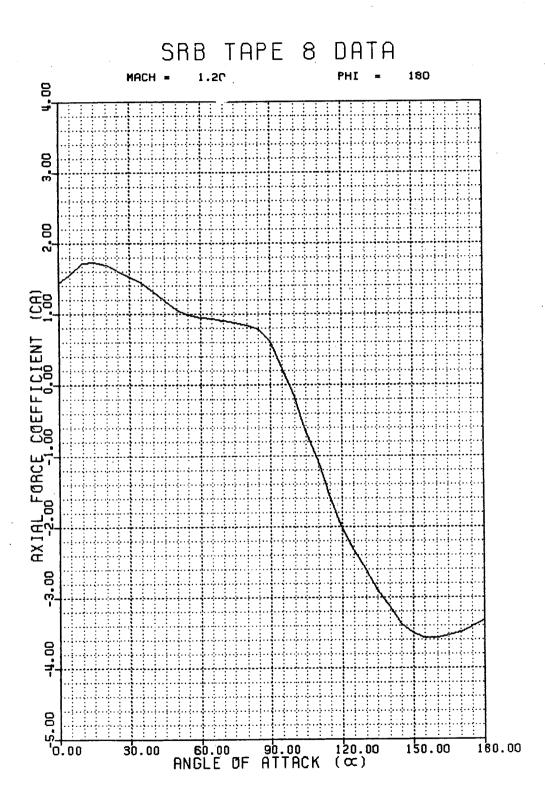


B-669

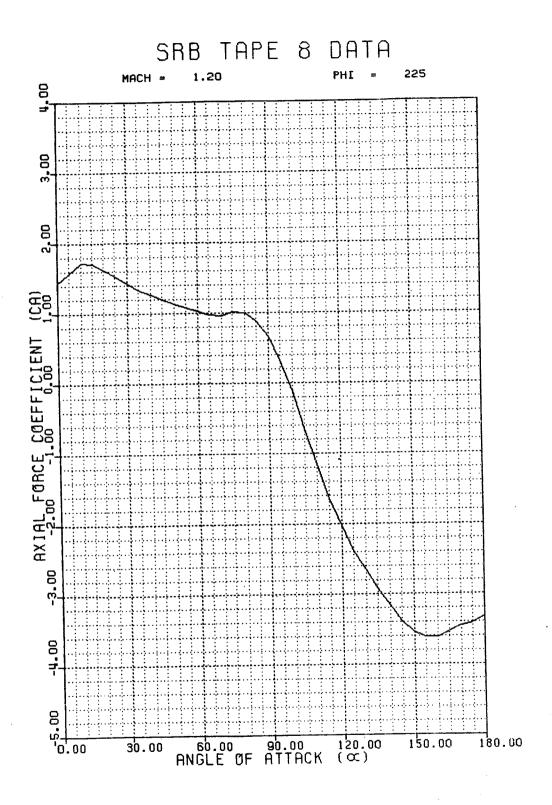
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



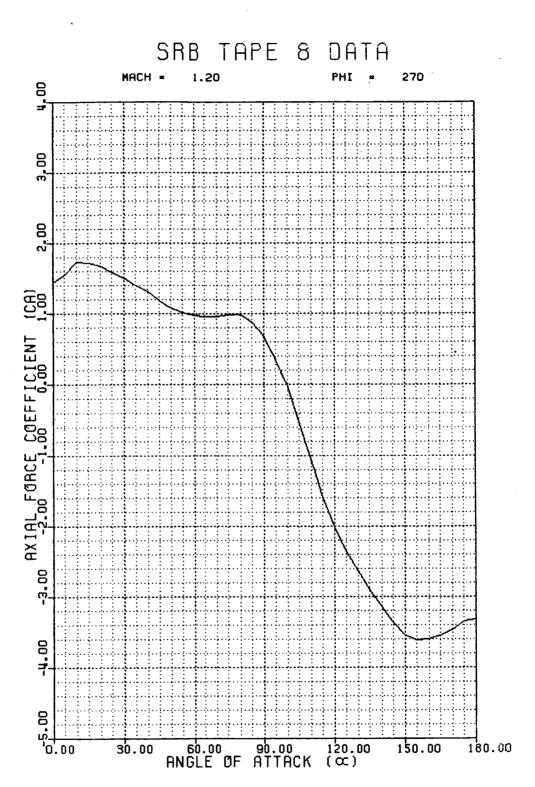
B-670 LOCKHEED-HUNTSVILLE ENGINEERING CENTER



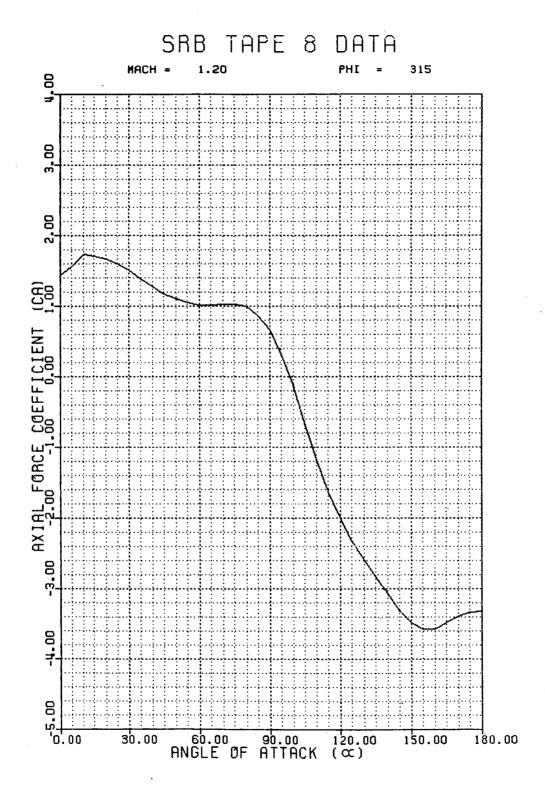
B-671
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



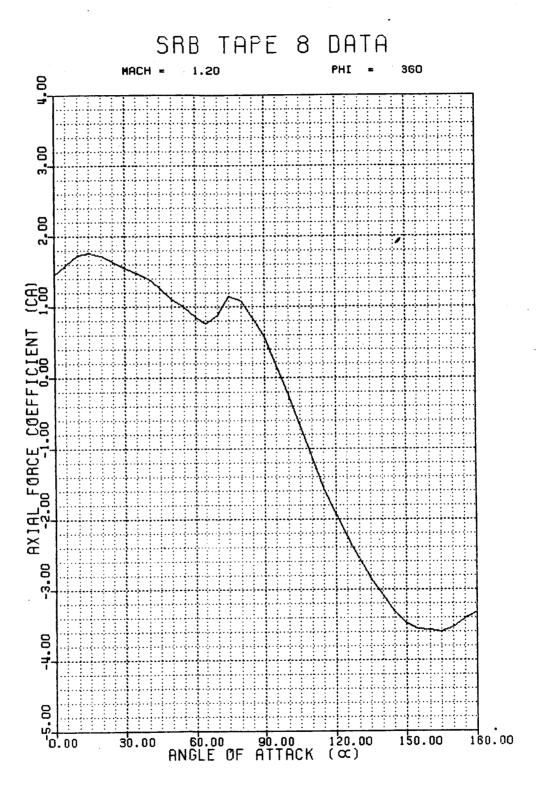
B-672
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



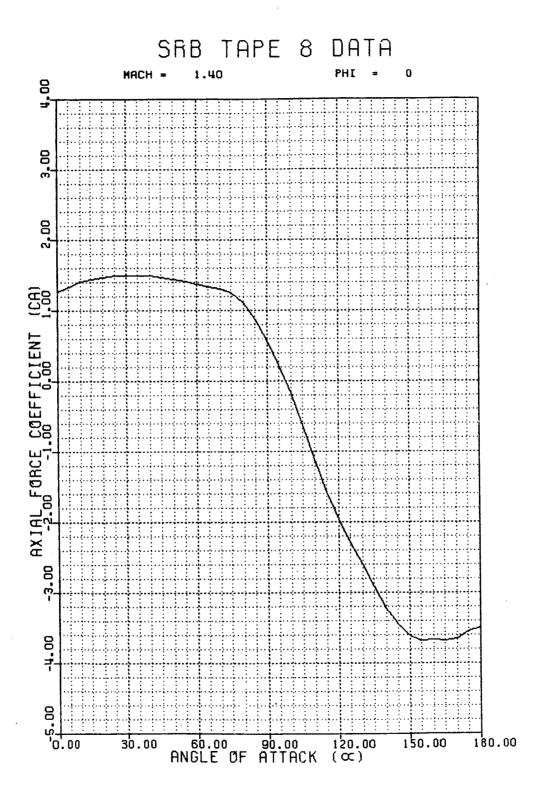
B-673



B-674
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

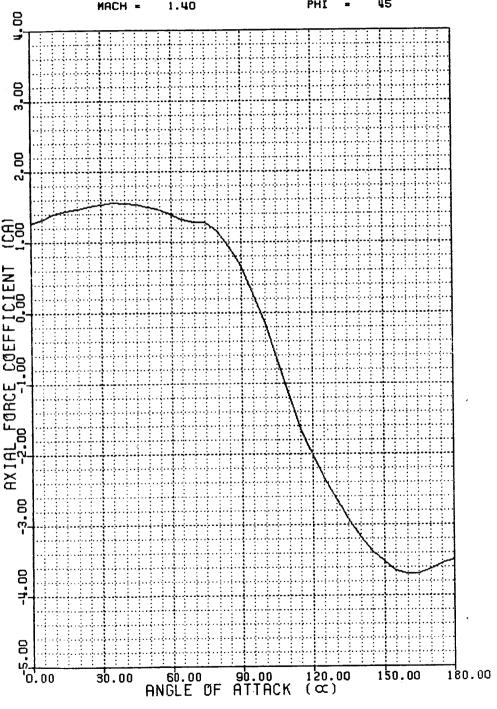


B-675
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

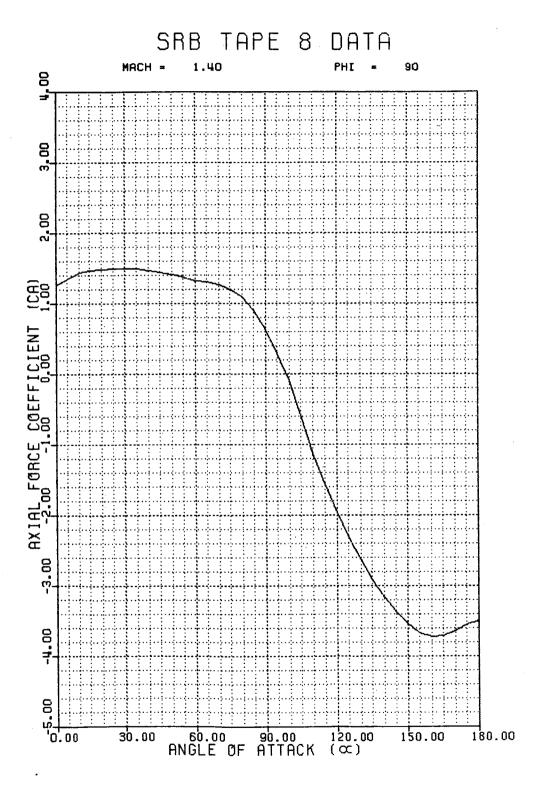


B-676
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA - 1.40 PHI -



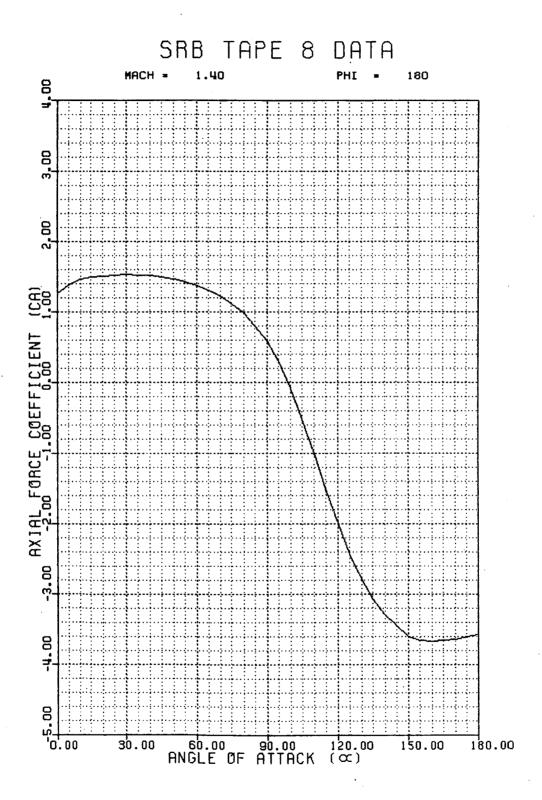
B-677



B-678
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 1.40 135 3,00 2,00 AXIAL FORCE COEFFICIENT -3.00 00 *h-0.00 120.00 (∝) 150.00 180.00 60.00 90.00 ANGLE OF ATTACK 30.00

B-679

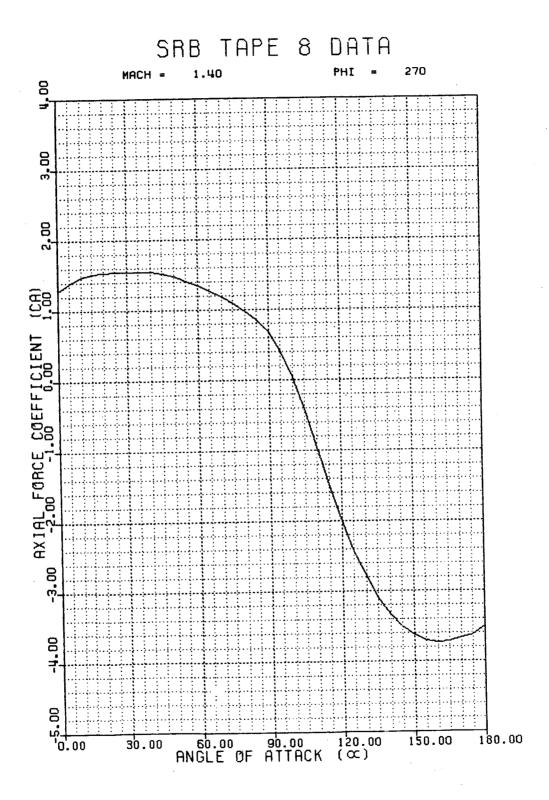


B-680

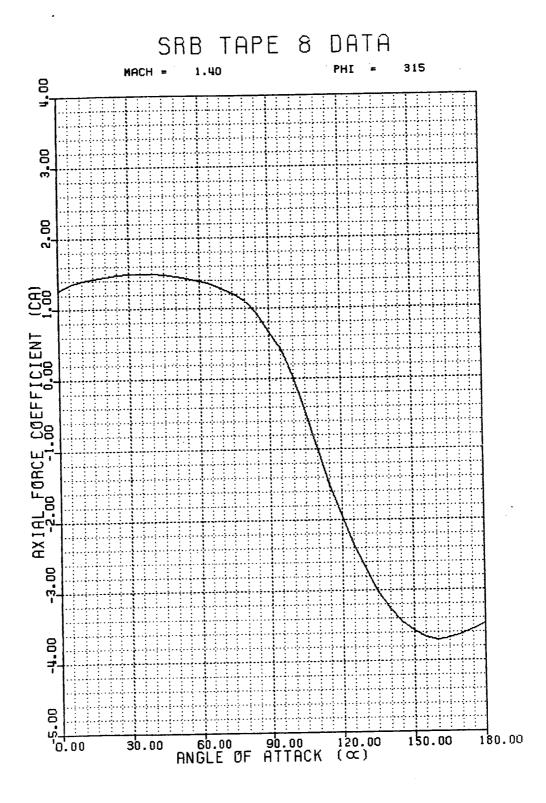
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA AXIAL FORCE COEFFICIENT -3.00 -u.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 150.00 180.00

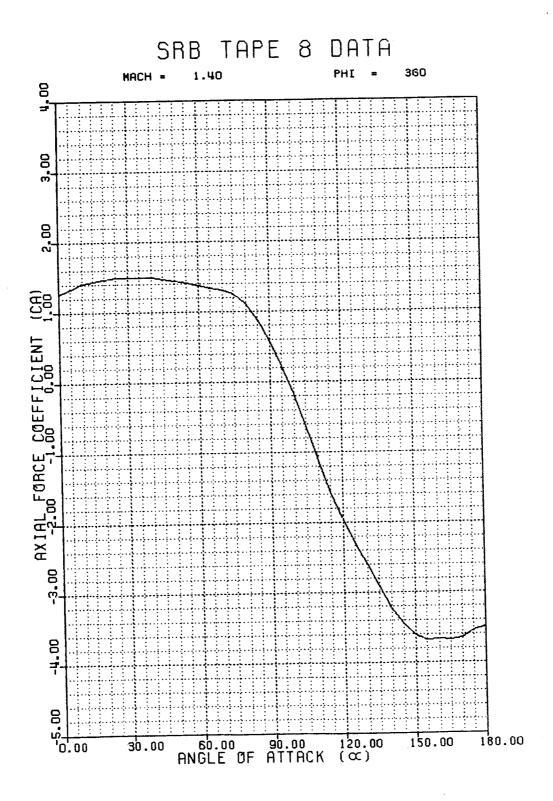
B-681
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



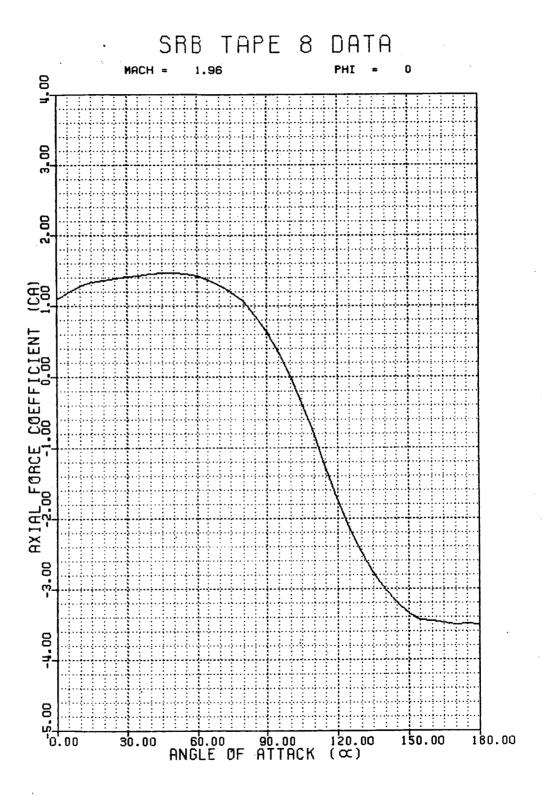
B-682
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-683
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-684
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-885
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

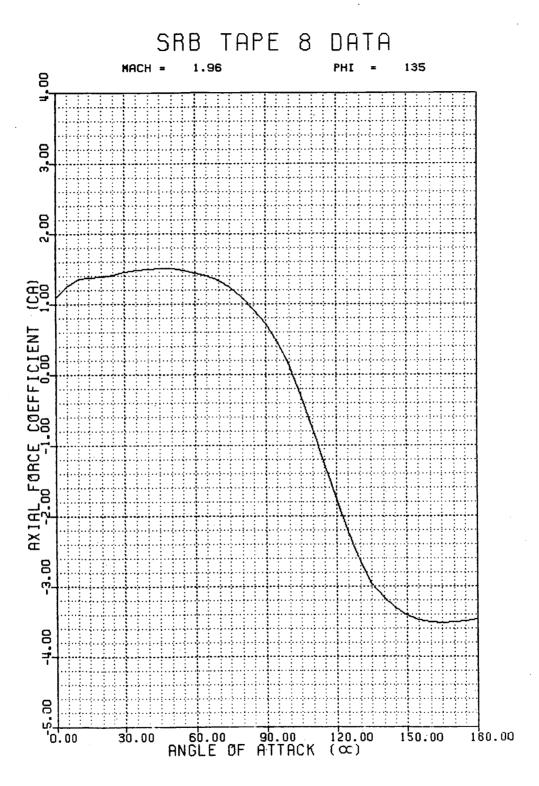
SRB TAPE 8 DATA 3.00 2,00 AXIAL FORCE COEFFICIENT -3.00 -H- 00 0.00 60.00 90.00 ANGLE OF ATTACK 120.00 (∝) 180.00 30.00

B-686

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA ų, 00 3,00 2,00 AXIAL FORCE COEFFICIENT -3.00 0.00 60.00 90.00 ANGLE OF ATTACK 120.00 (∝) 150.00 180.00

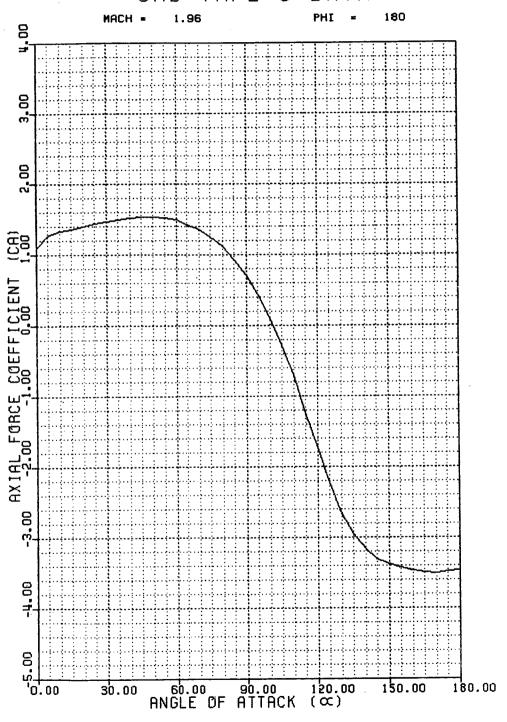
B-687
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



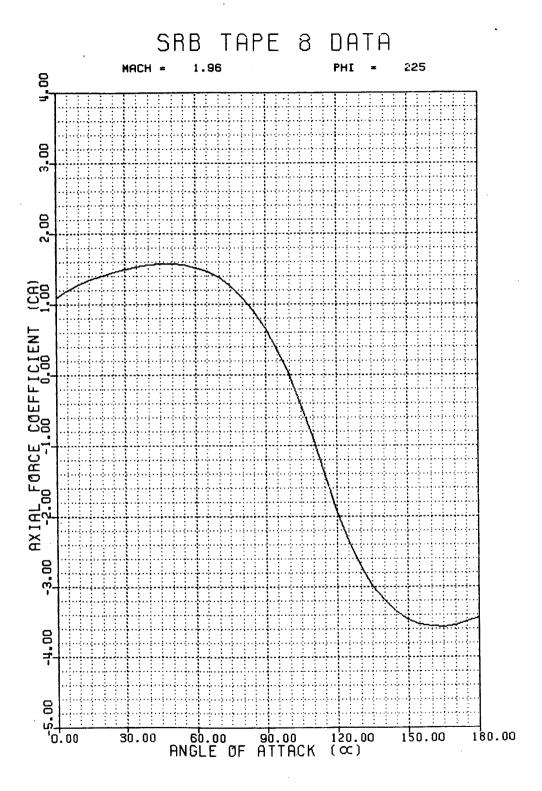
B-688

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

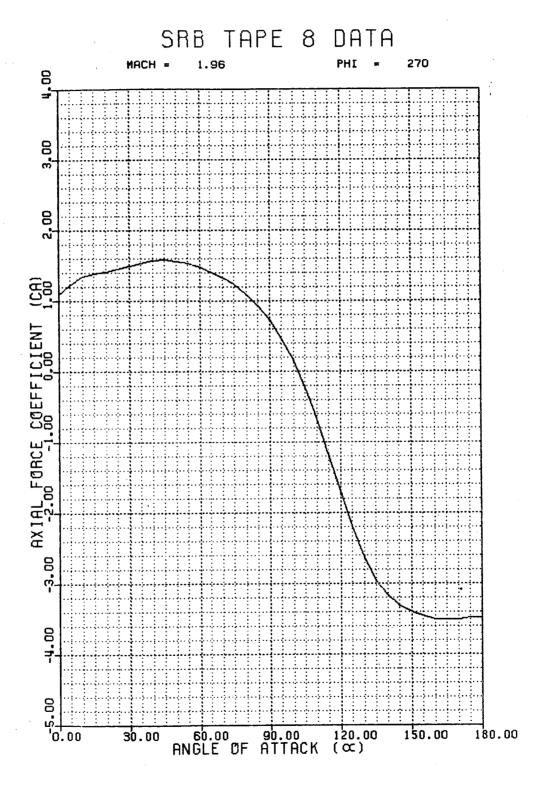
SRB TAPE 8 DATA



B-689



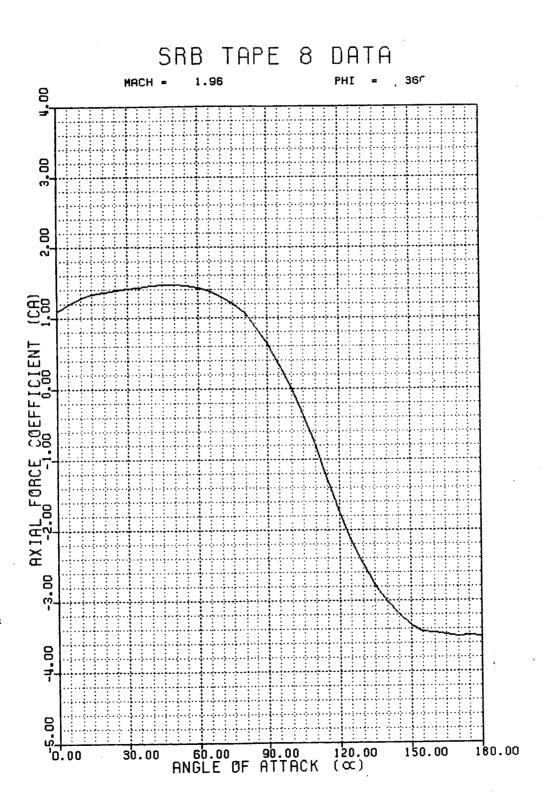
B-690
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



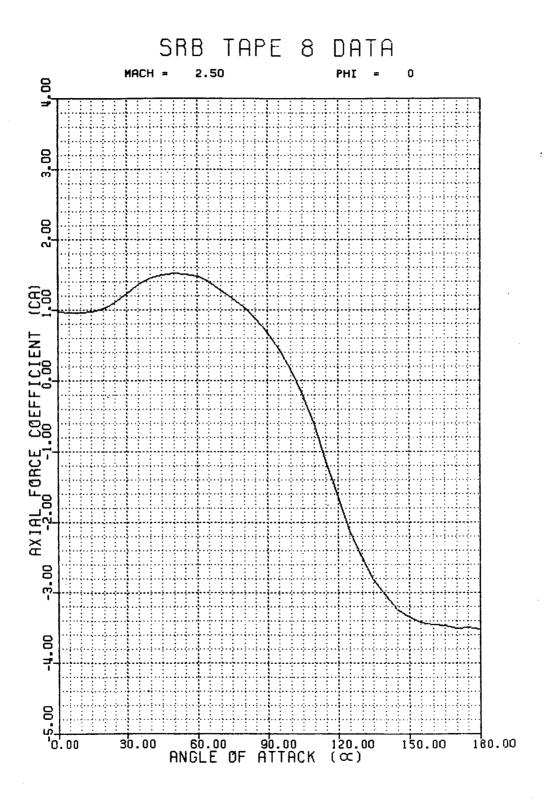
B-691
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 1.96 315 MACH = 3,00 2,00 AXIAL FORCE COEFFICIENT (CA) -3.00 0.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 30.00 150.00 180.00

B-692
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-693



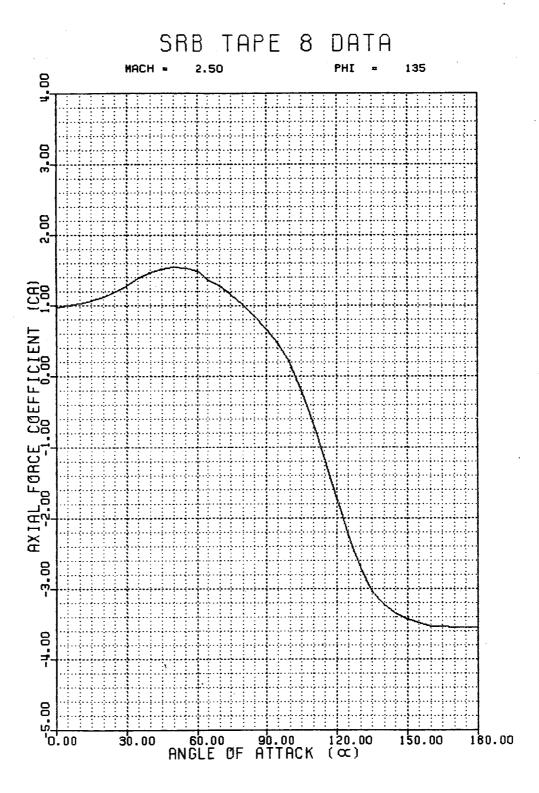
B-694
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 3.00 2.00 AXIAL FORCE COEFFICIENT -3.00 -t-00 0.00 60.00 90.00 ANGLE OF ATTACK 150.00 180.00

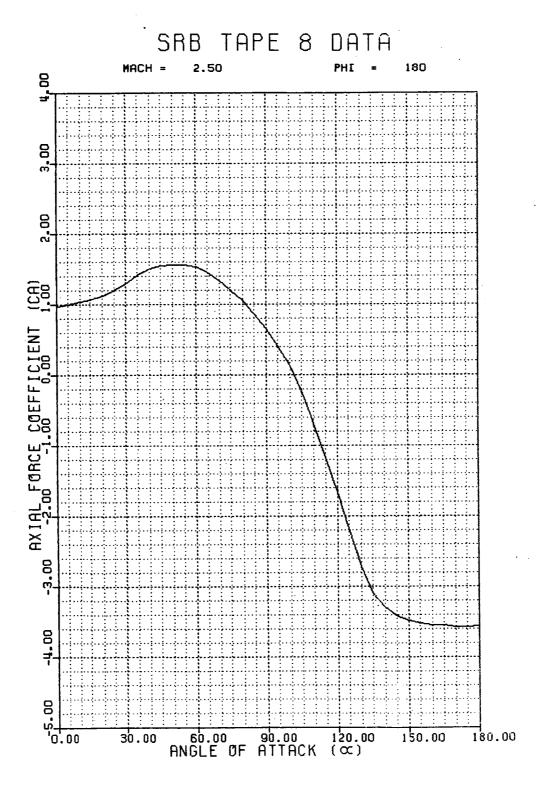
B-695

SRB TAPE 8 DATA 4.00 3.00 2,00 AXIAL FORCE COEFFICIENT -3.00 -u. 00 2.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 30.00 150.00 180.00

B-696
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

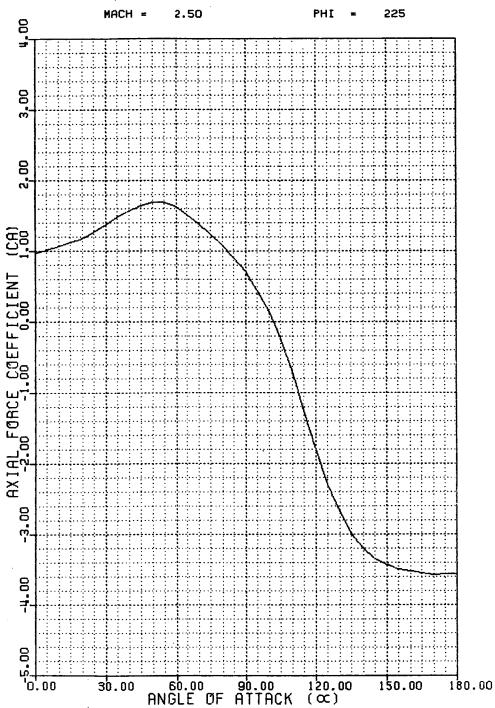


B-697 . LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-698
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

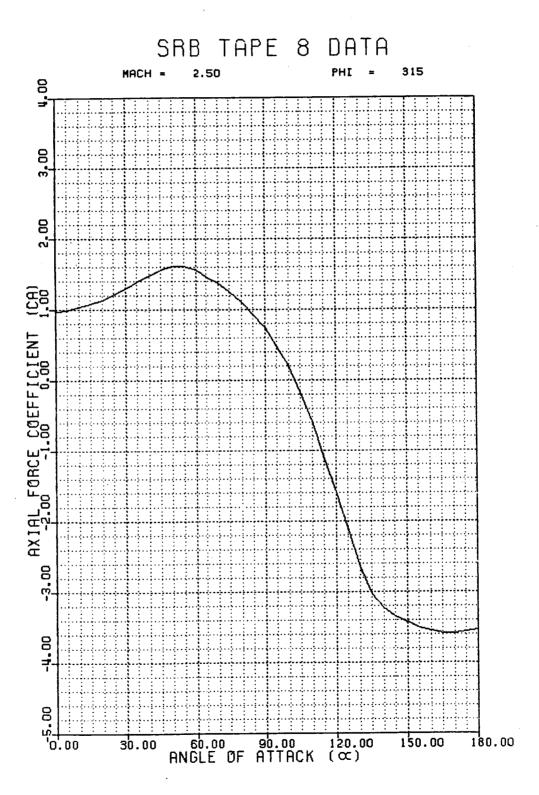
SRB TAPE 8 DATA



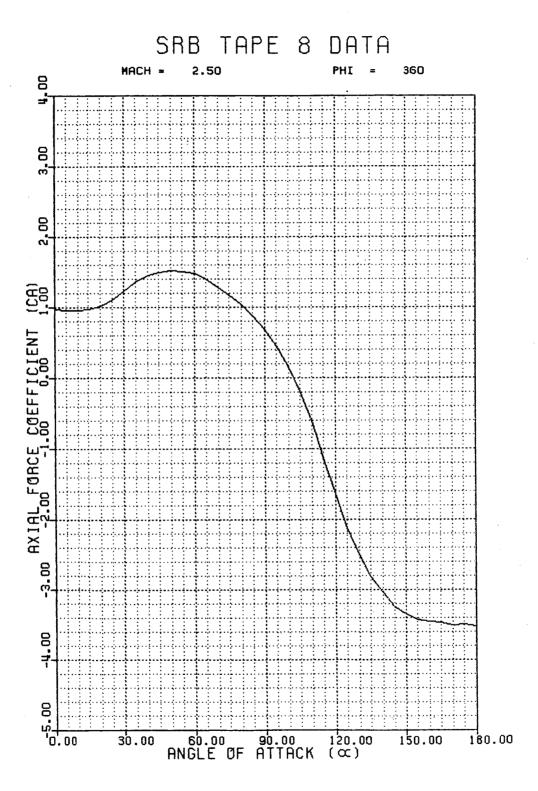
B-699

SRB TAPE 8 DATA 3,00 2,00 AXIAL FORCE COEFFICIENT 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 180.00

B-700

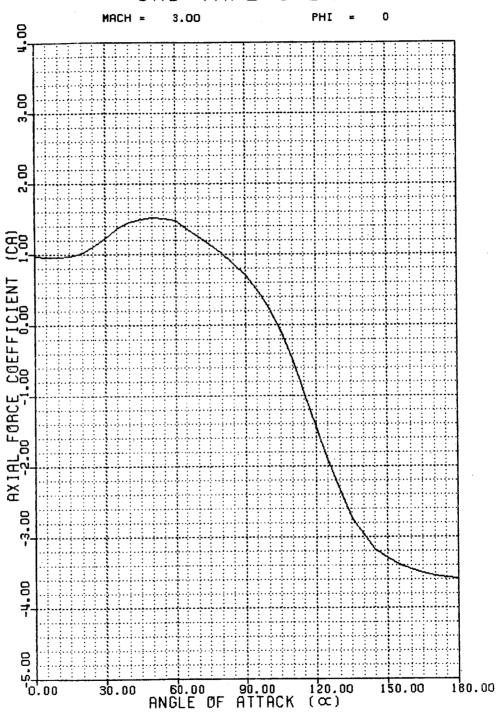


B-701



B-702

SRB TAPE 8 DATA



B-703

SRB TAPE 8 DATA MACH = 4.00 3.00 2,00 AXIAL FORCE COEFFICIENT -3.00 00 **-**H-2.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 150.00 30.00 180.00

B-704
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA PHI MACH = 3.00 90 3.00 2,00 AXIAL FORCE COEFFICIENT -3.00 0.00 150.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 180.00 30.00

B-705

SRB TAPE 8 DATA 135 3,00 2,00 AXIAL FORCE COEFFICIENT -3.00 -it.00 00.2.00

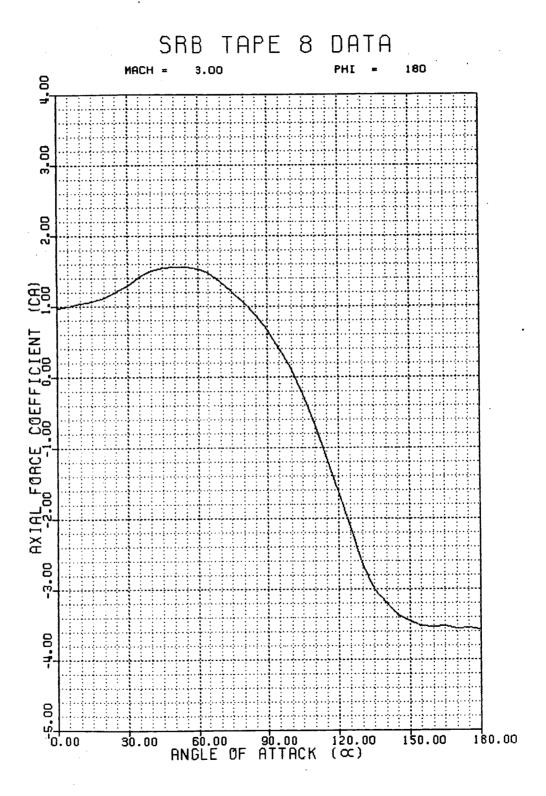
B-706 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

60.00 90.00 120.00 ANGLE OF ATTACK (∝)

150.00

180.00

30.00



B-707
.
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 3.00 MACH = 225 3.00 2,00 FORCE COEFFICIENT -3.00 0.00

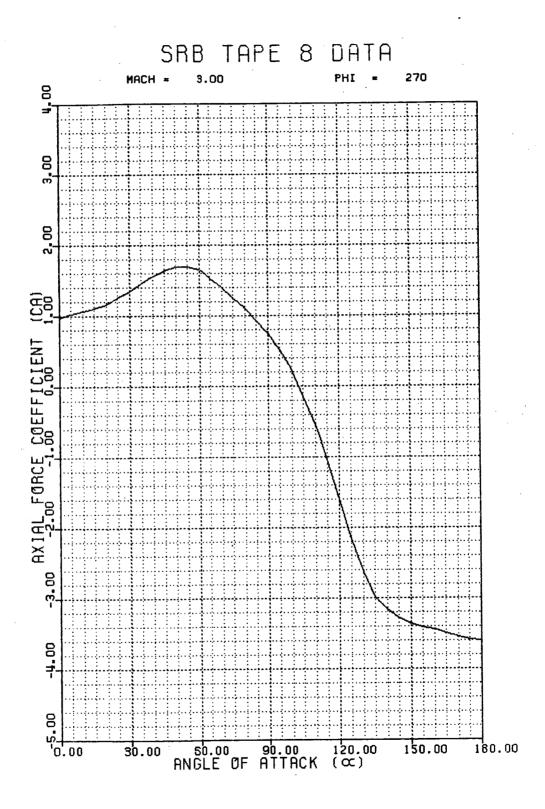
B-708 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

60.00 90.00 120.00 ANGLE OF ATTACK (∝)

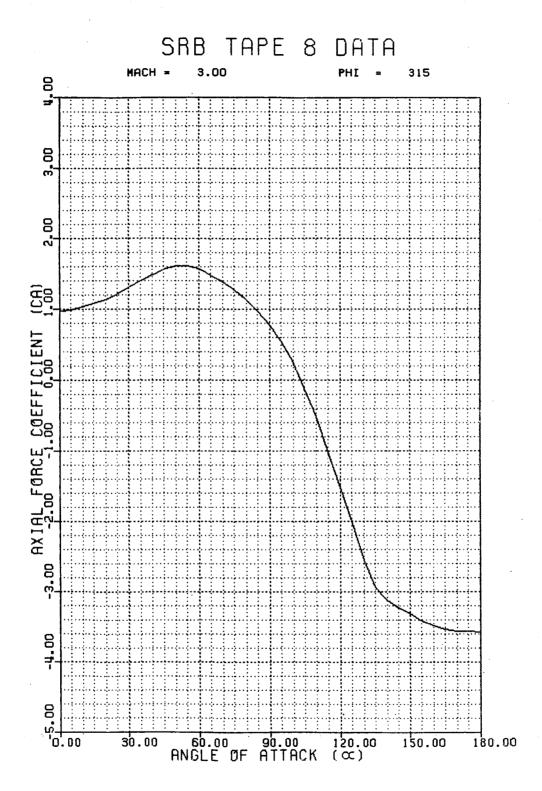
150.00

180.00

30.00

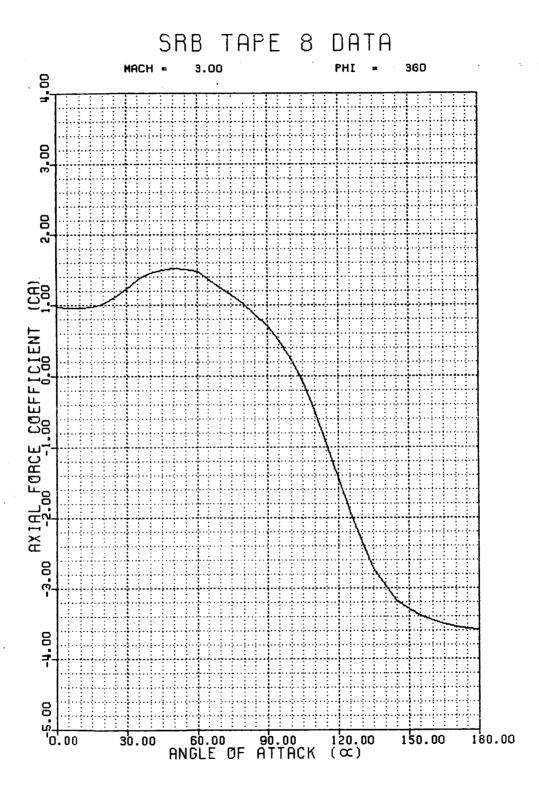


B-709

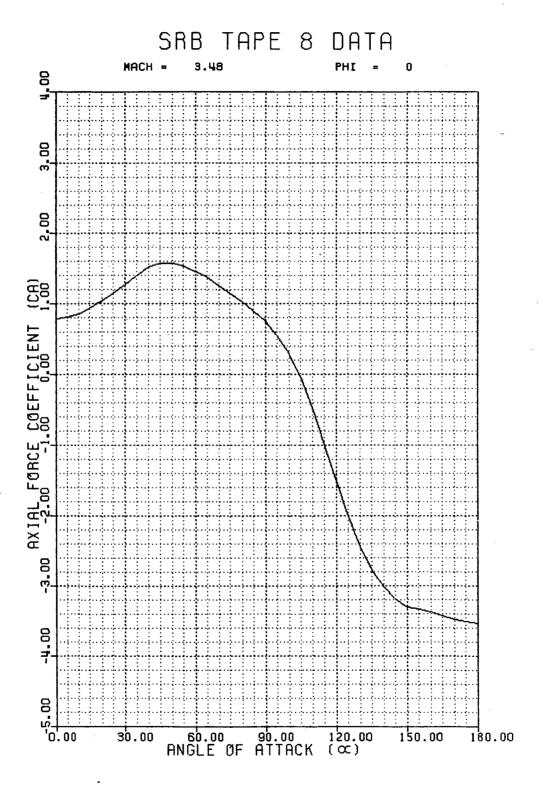


B-710

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



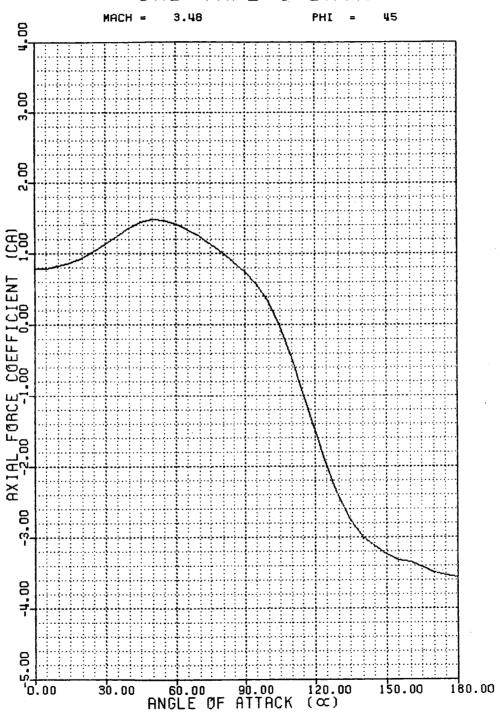
B-711



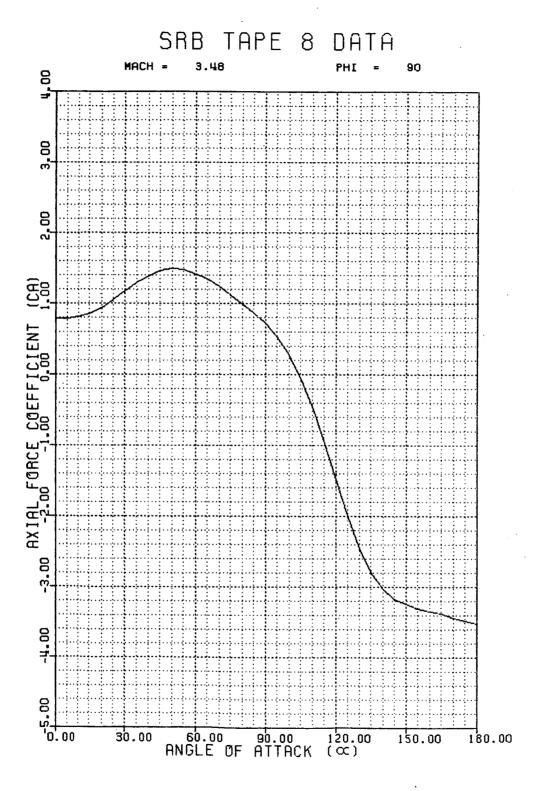
B-712

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

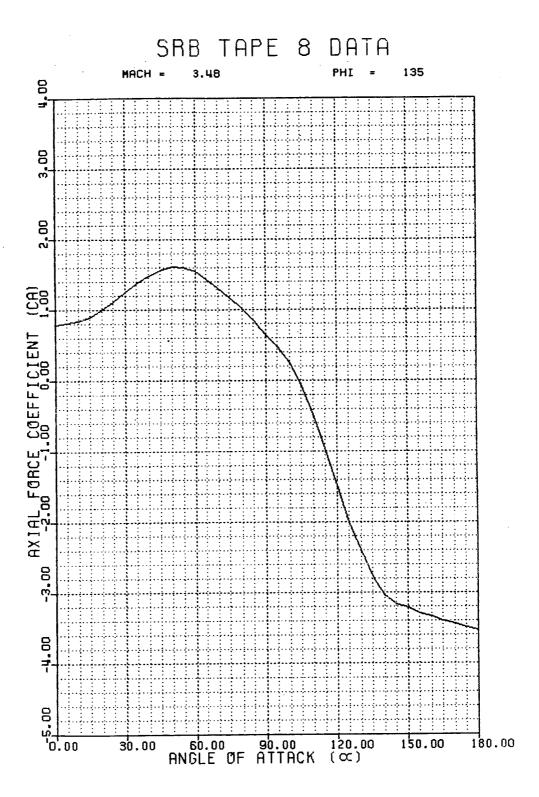
SRB TAPE 8 DATA



B-713

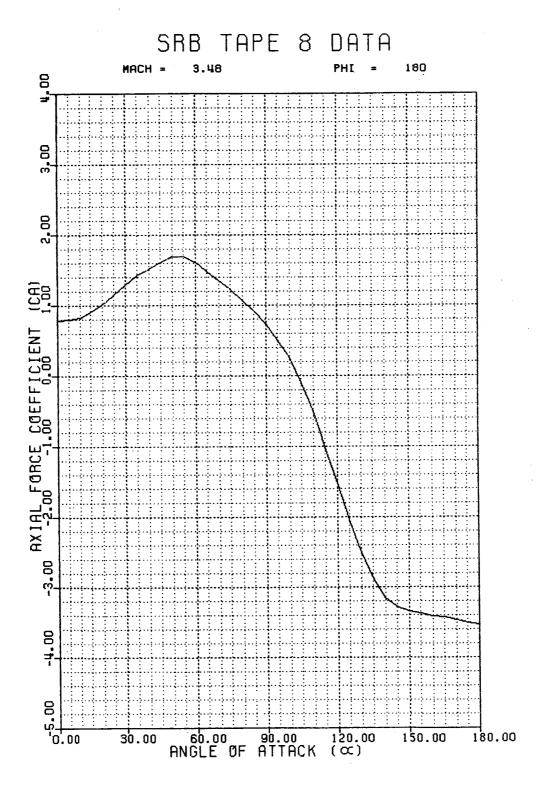


B-714
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



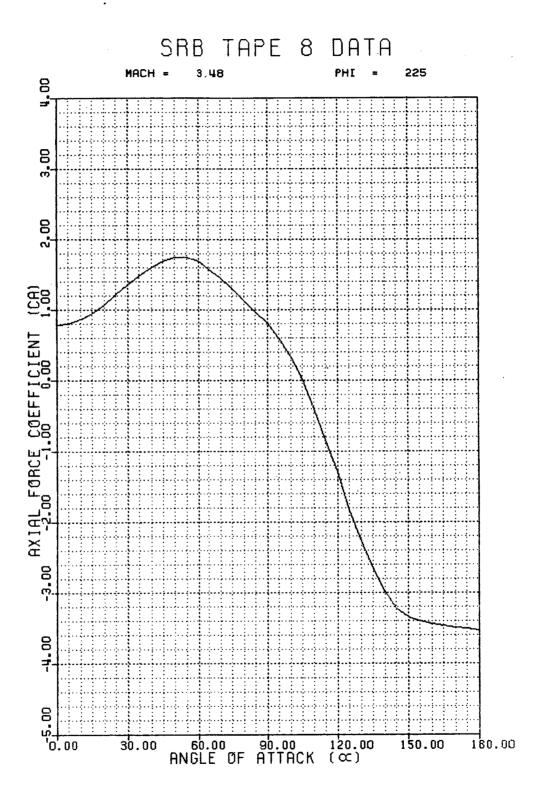
B-715

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

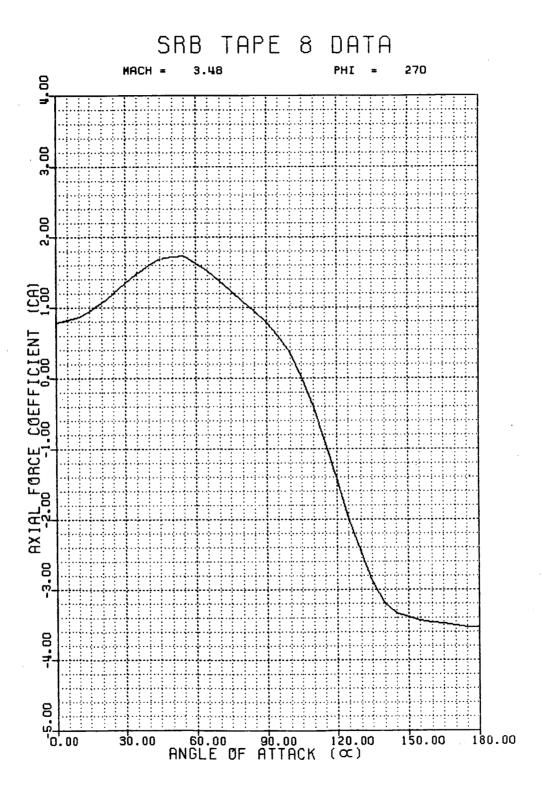


B-716

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-717

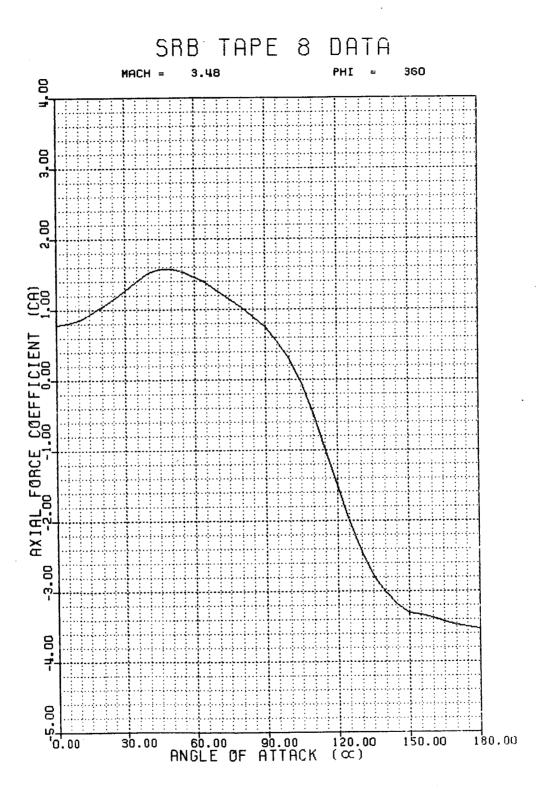


B-718

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA MACH = 315 ų. 00 3.00 2,00 AXIAL FORCE COEFFICIENT -3.00 -u- 00 0.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 150.00 30.00 180.00

B-719

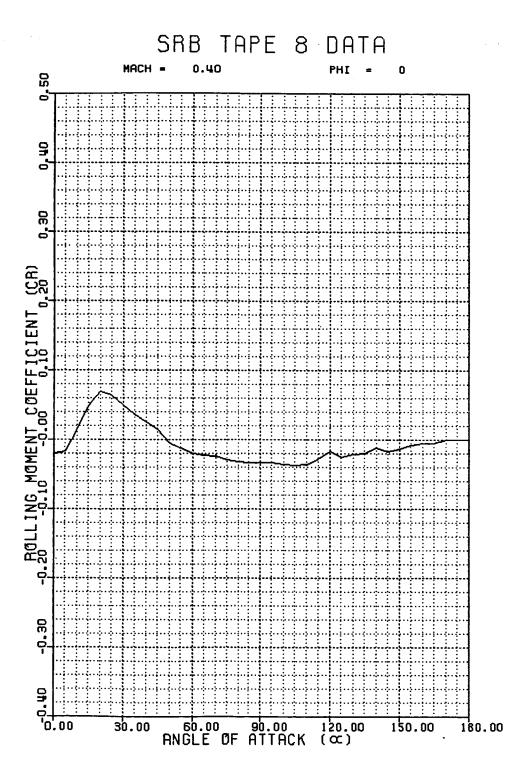


B-720

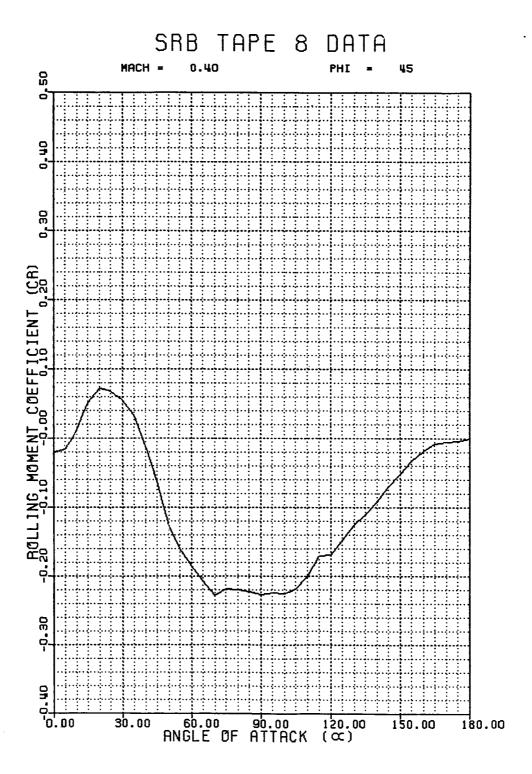
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

ROLLING MOMENT (CR)

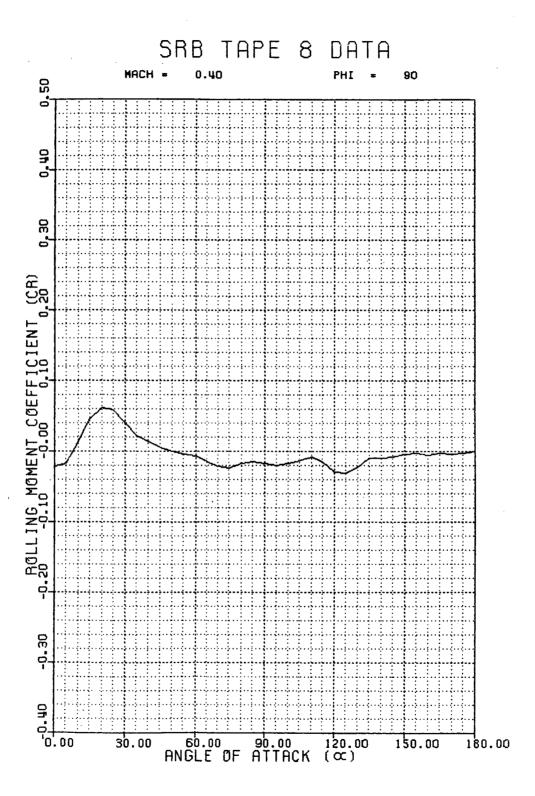
Mach Number	Page
0.4	B-721
0.5	в-730
0.55	в-739
0 .6	в-748
0.7	· B-757
0.8	B-766
0.9	B-775
0.95	в-784
1.05	B-793
1.1	в-802
1.2	B-811
1.4	в-820
1.96	в-829
2.5	в-838
3.0	B-847
3.48	B-856



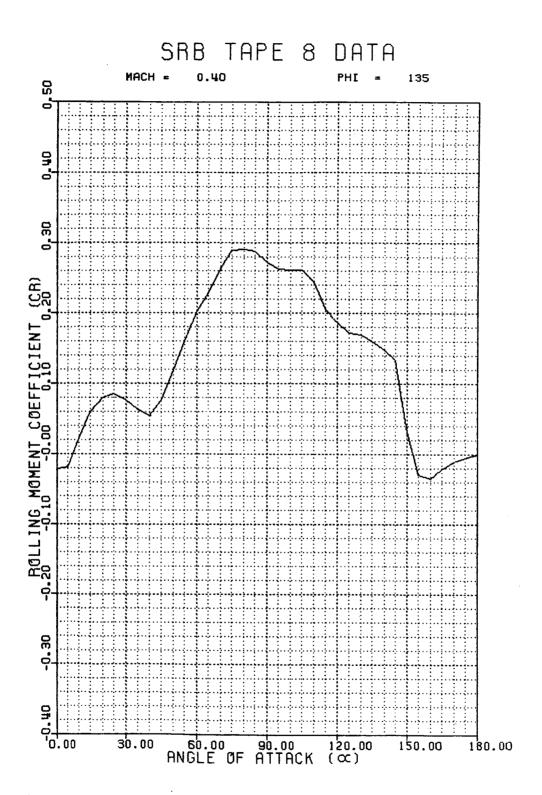
B-721



B-722
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



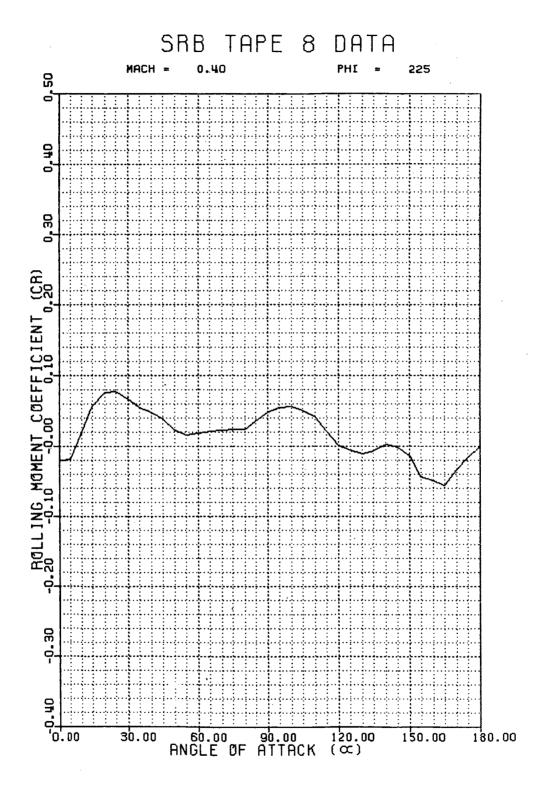
B-723
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-724
LCCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 180 0.50 0,30 -0.20 -0.10 MOMENT COEFFICIENT (CR) -0.30 0.00 60.00 90.00 RNGLE ØF ATTACK 120.00 (∝) 150.00 180.00

B-725



B-726

SRB TAPE 8 DATA 270 0.50 0,30 -9.20 -9.10 MOMENT COEFFICIENT -0.30

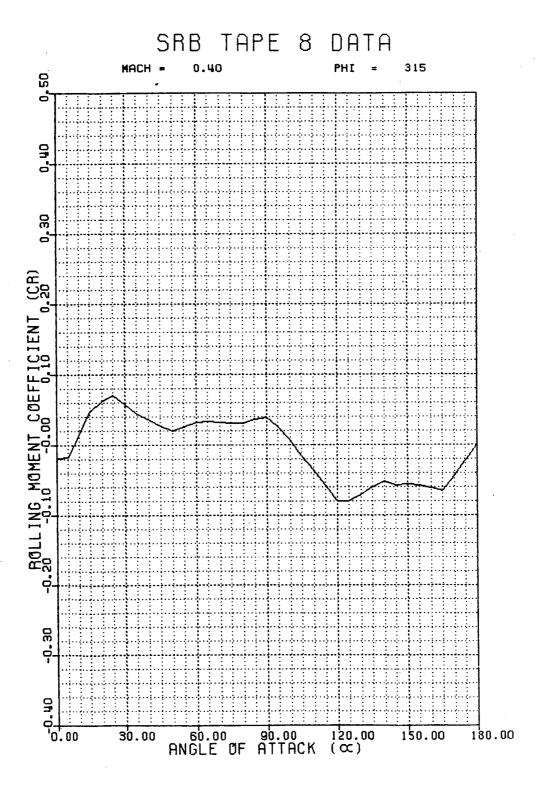
B-727

150.00

160.00

60.00 90.00 ANGLE OF ATTACK

0.00



B-728

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 0.40 360 -0.20 -0.10 MOMENT COEFFICIENT (CR) 9 0.00

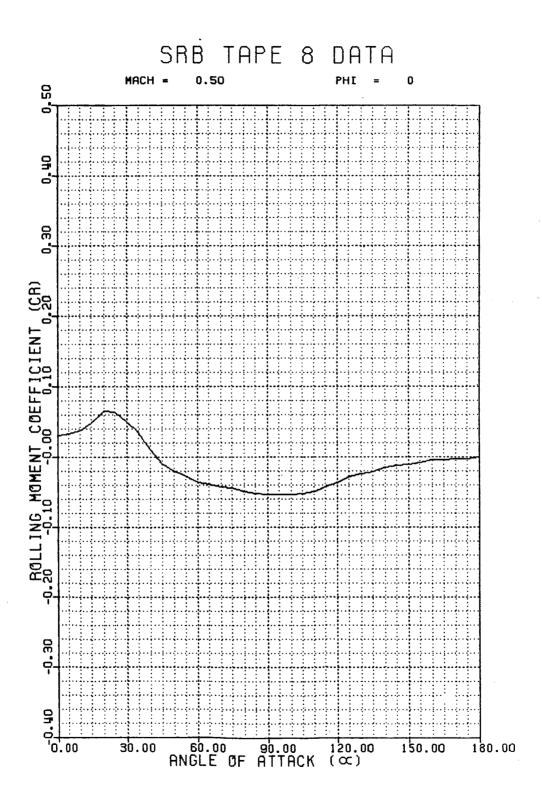
B-729 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

60.00 90.00 ANGLE OF ATTACK

30.00

120.00 (∝)

150.00



B-790

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 0.50 MACH = 45 0,40 -0.20 -0.10 MOMENT COEFFICIENT (CR) 0.00

B-731

60.00 90.00 ANGLE OF ATTACK

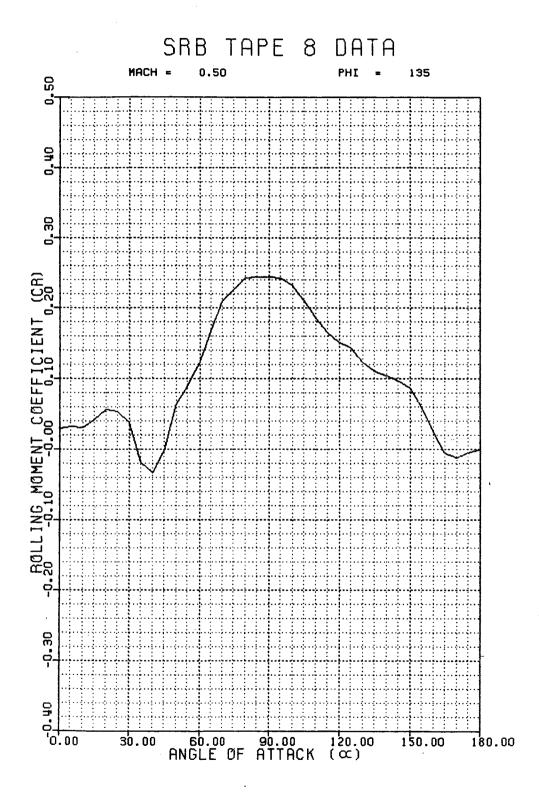
120.00 (∝)

150.00

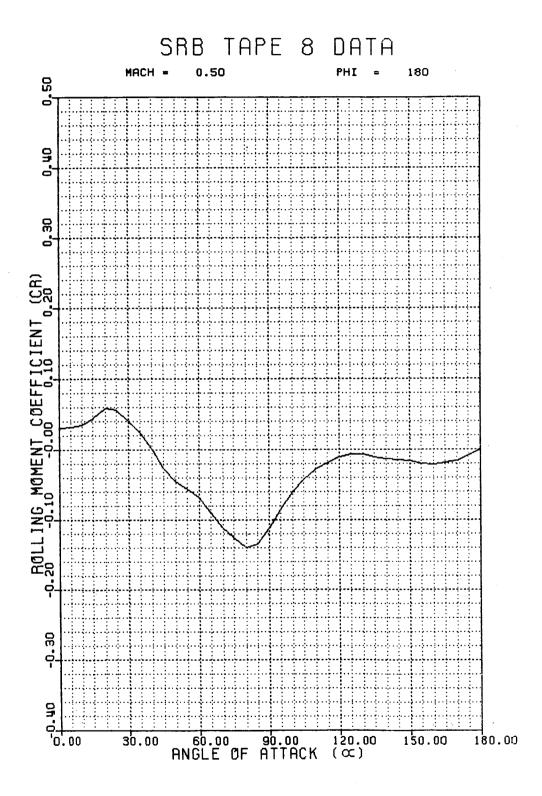
180.00

SRB TAPE 8 DATA 0,50 0,30 60.00 90.00 120.00 ANGLE UF ATTACK (∝) 30.00 150.00 180.00

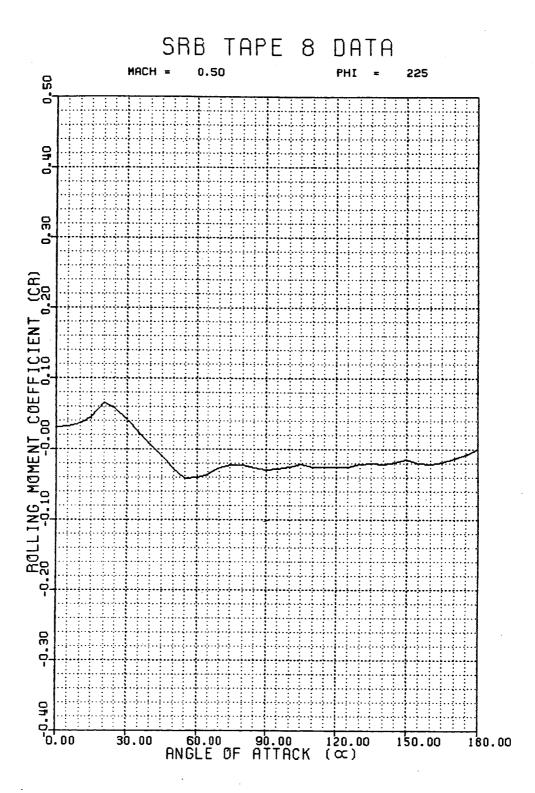
B-732
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



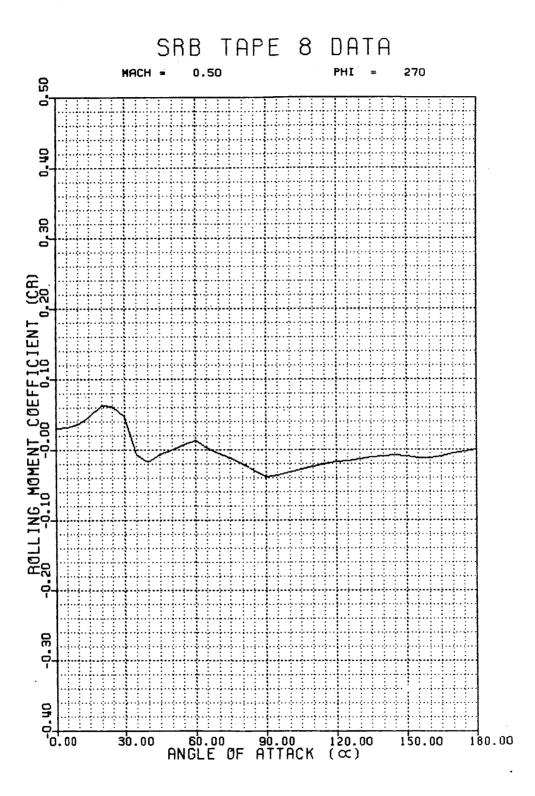
B-733



B-734
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-735



B-796

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA MACH = 315 0,50 0, 40 0,30 -9.20 -9.10 MOMENT COEFFICIENT (CR) -0-30 GH-0-0.00

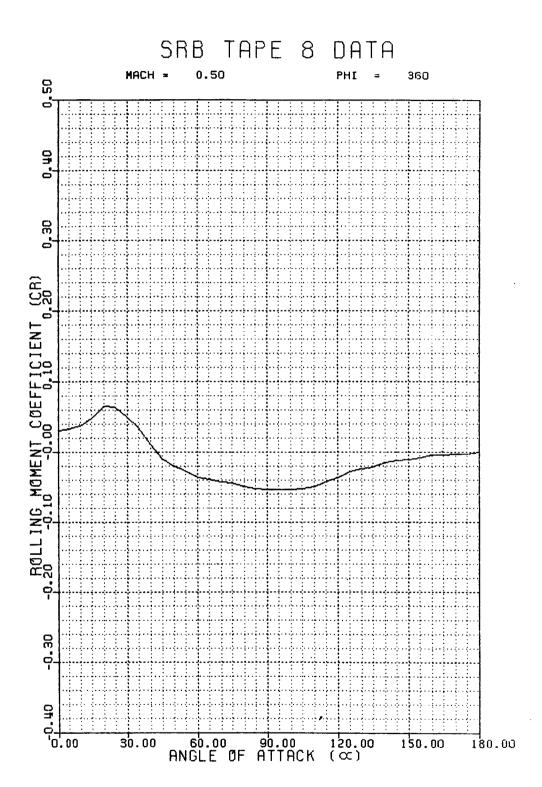
B-797 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

60.00 90.00 ANGLE OF ATTACK

30.00

120.00 (∝)

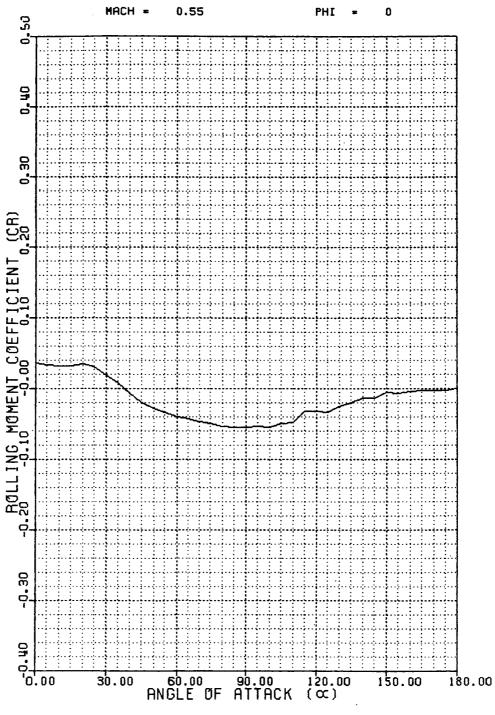
150.00



B-738

LOCKHEED-HUNTSYILLE ENGINEERING CENTER

SRB TAPE 8 DATA - 0.55 PHI -



B-739

SRB TAPE 8 DATA 0,50 -9.20 -9.10 MOMENT COEFFICIENT (CR) 9 0.00 60.00 90.00 ANGLE OF ATTACK 120.00 (∝) 150.00 180.00

B-740

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 90 0,50 0,40 0,30 -9.20 -9.10 -9.00 0.10 0.20 -0-30 0.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 150.00 180.00 30.00

B-741
.
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

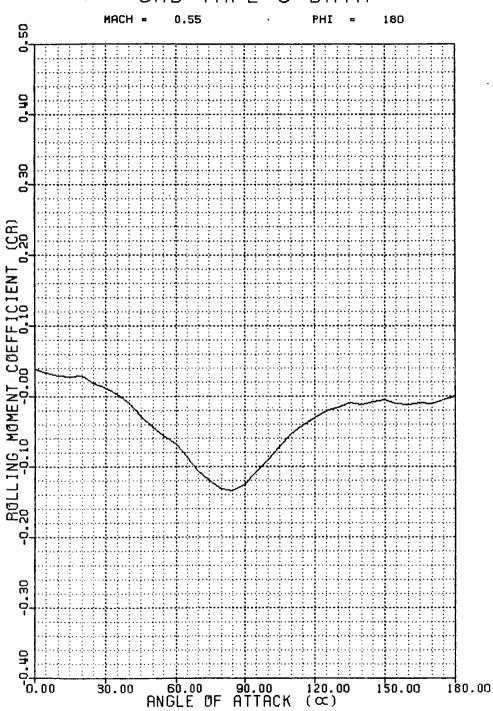
SRB TAPE 8 DATA 135 0,30

B-742
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

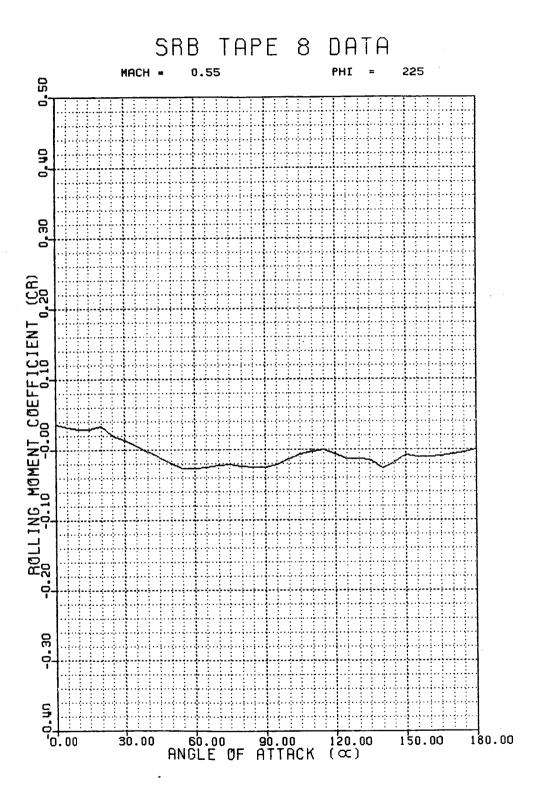
180.00

60.00 90.00 ANGLE OF ATTACK

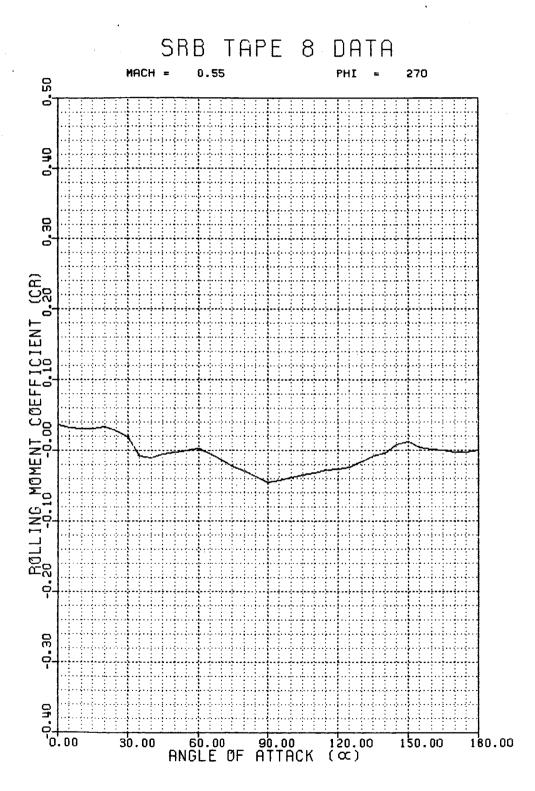
SRB TAPE 8 DATA



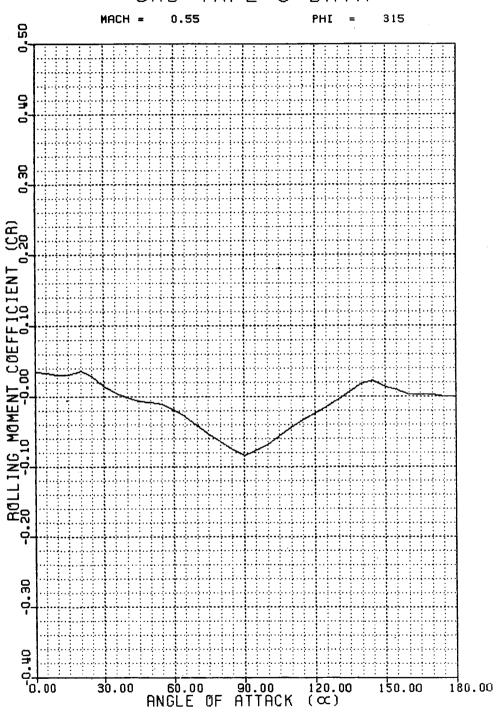
B-743



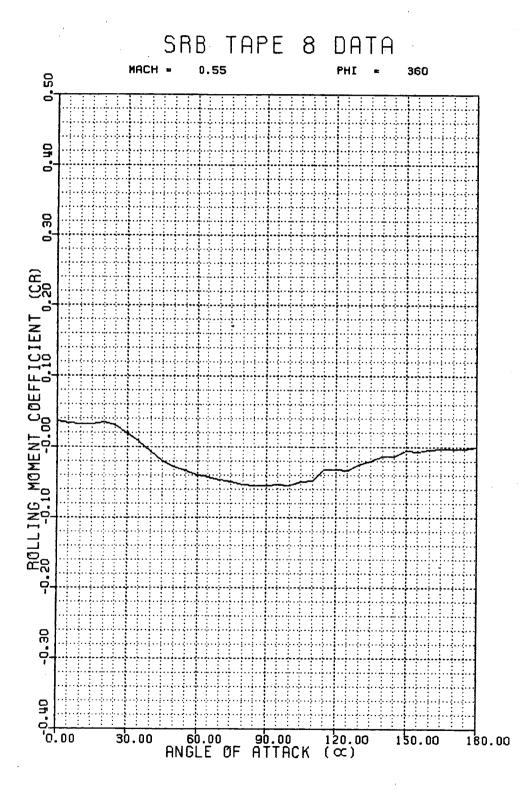
B-744
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



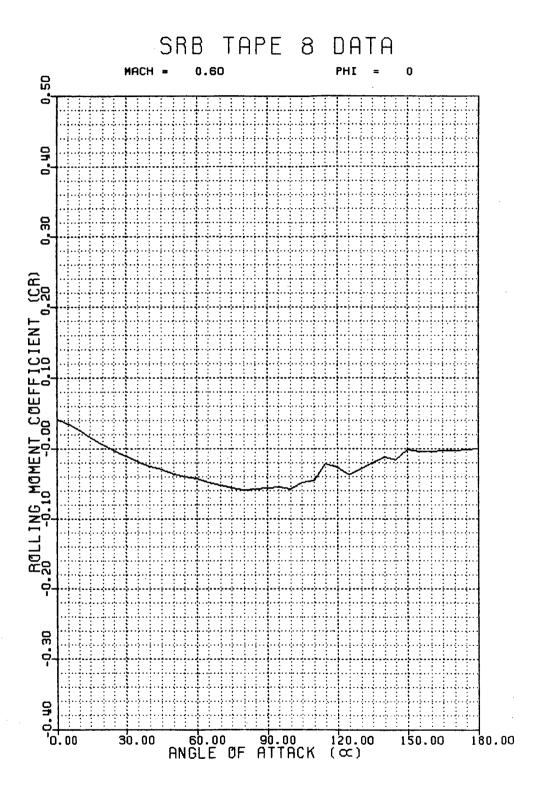
B-745



B-746
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-747



B-748

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 0.60 MACH = 0**†** 0 0,30 -0.20 -0.10 MOMENT COEFFICIENT (CR) 0,00 30.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

B-749

0.00

30.00

SRB TAPE 8 DATA 0,30 -0.20 -0.10 MOMENT COEFFICIENT

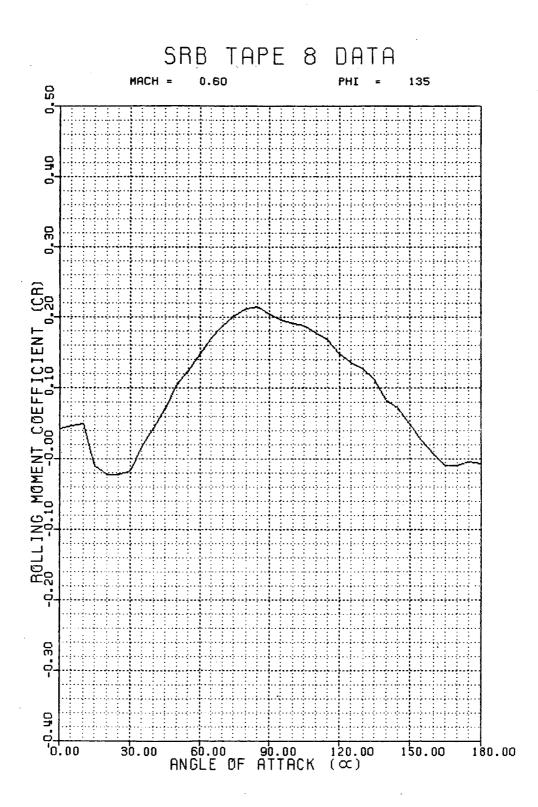
B-750

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

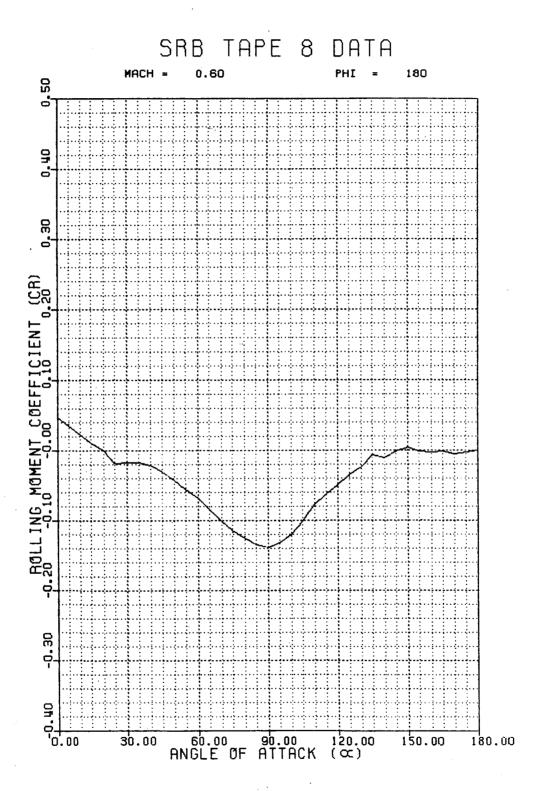
150.00

180.00

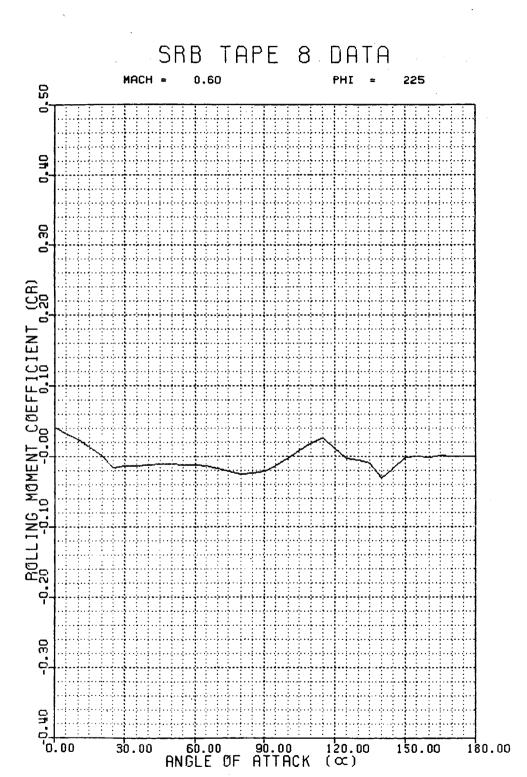
60.00 90.00 ANGLE OF ATTACK



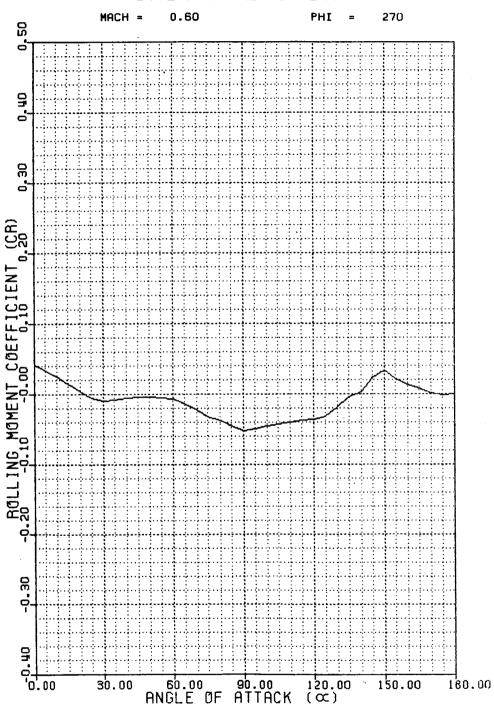
B-751
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-752



B-753



B-754

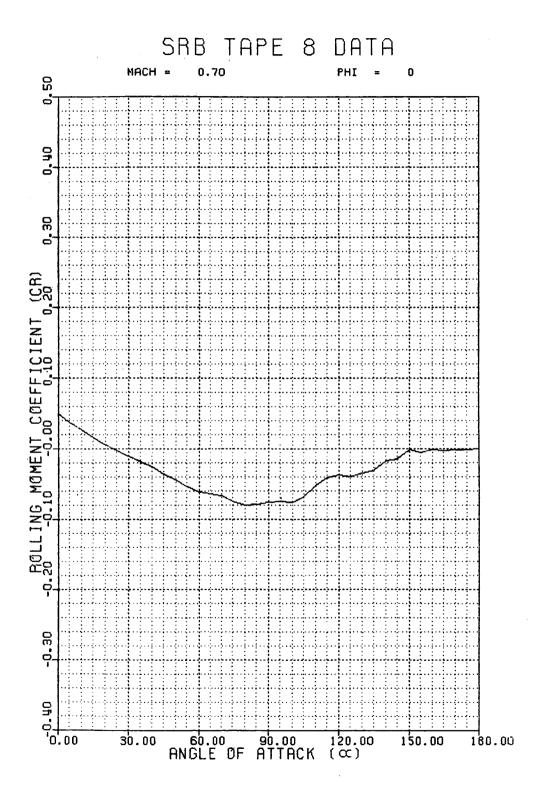
SRB TAPE 8 315 0, 40 -0.20 -0.10 MOMENT COEFFICIENT 0.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 30.00 150.00 180.00

B-755

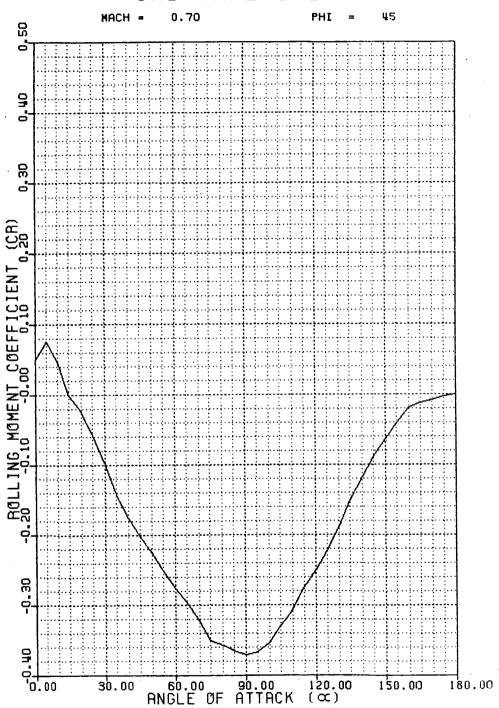
SRB TAPE 8 DATA 0,50 ROLLING MOMENT COEFFICIENT (CR) 180.00 60.00 90.00 ANGLE OF ATTACK 150.00

B-756

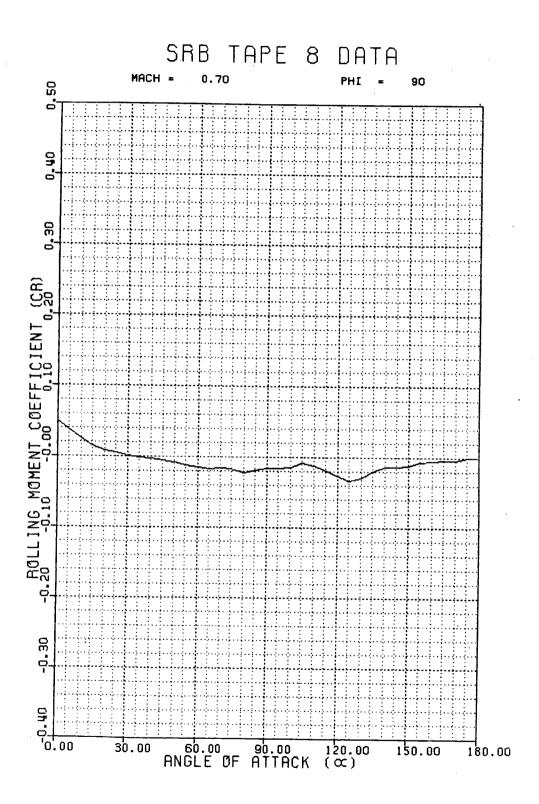
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



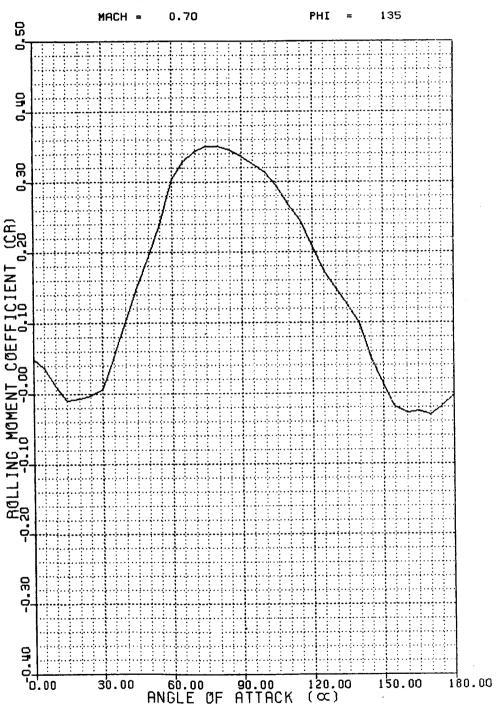
B-757



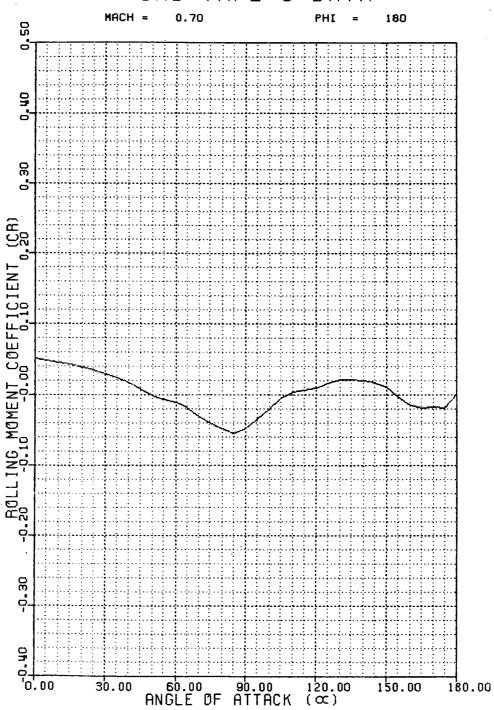
B-758



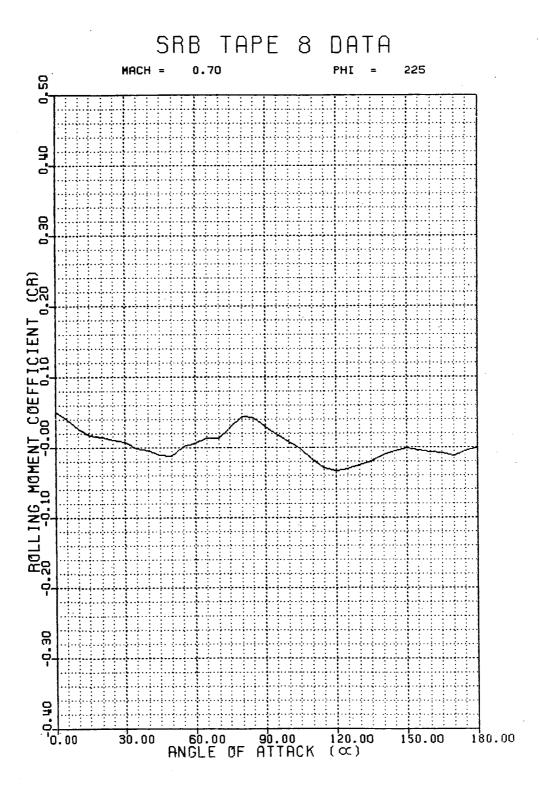
B-759



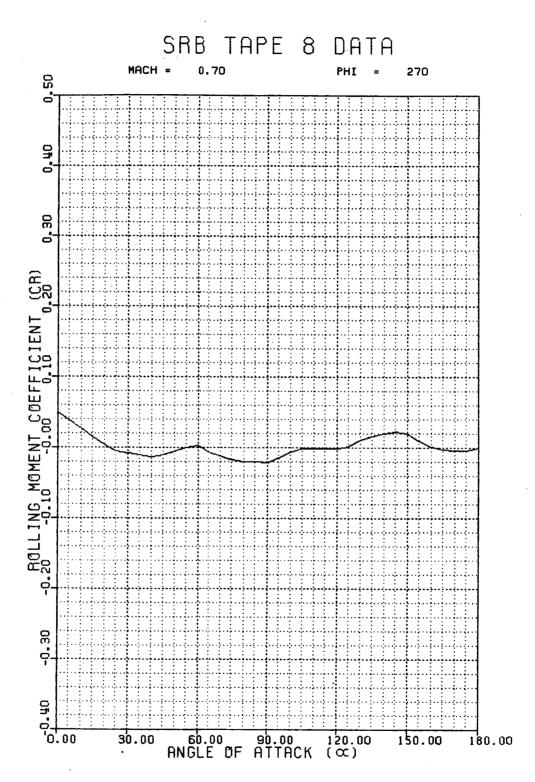
B-760



B-761



B-762
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-763

8-764
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

120.00 (∝) 150.00

180.00

60.00 90.00 ANGLE OF ATTACK

SRB TAPE 8 DATA 0.70 MACH = 360 20 0, 40 -0.20 -0.10 MOMENT COEFFICIENT (CR)

B-765

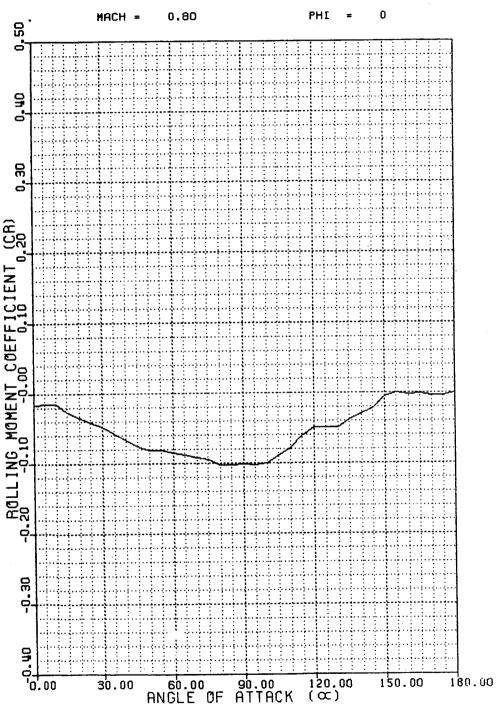
60.00 90.00 120.00 ANGLE OF ATTACK (∝)

150.00

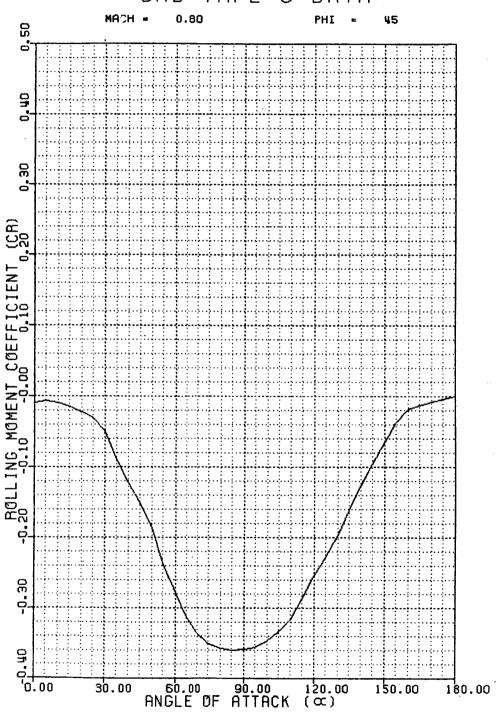
180.00

0.00

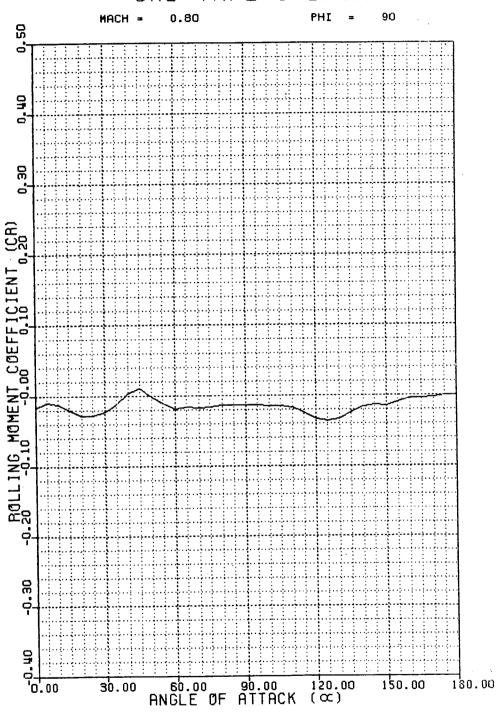
30.00



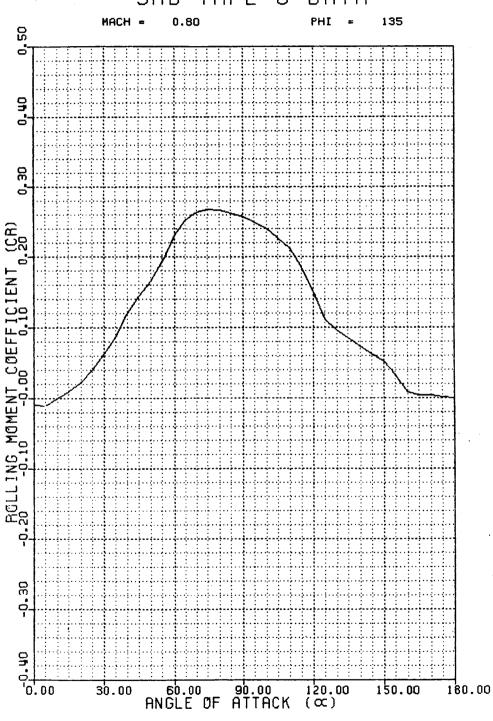
B-766



B-767



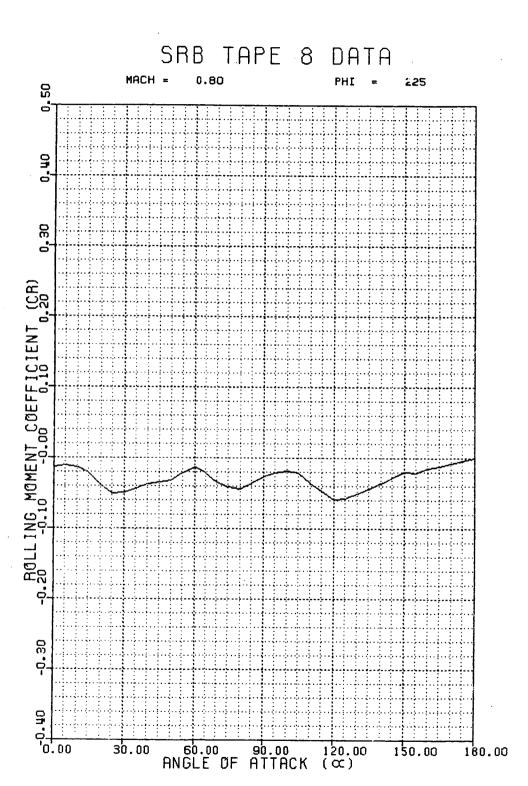
B-768



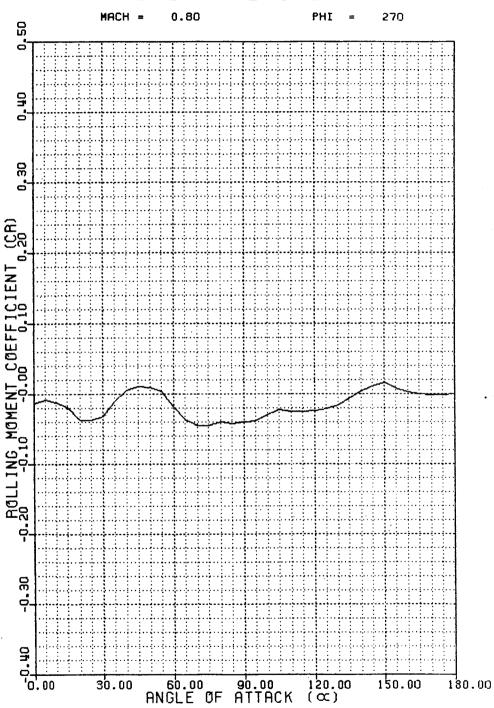
B-769

SRB TAPE 8 DATA 180 0,30 -0.20 -0.10 MOMENT COEFFICIENT 0,00 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 150.00 180.00

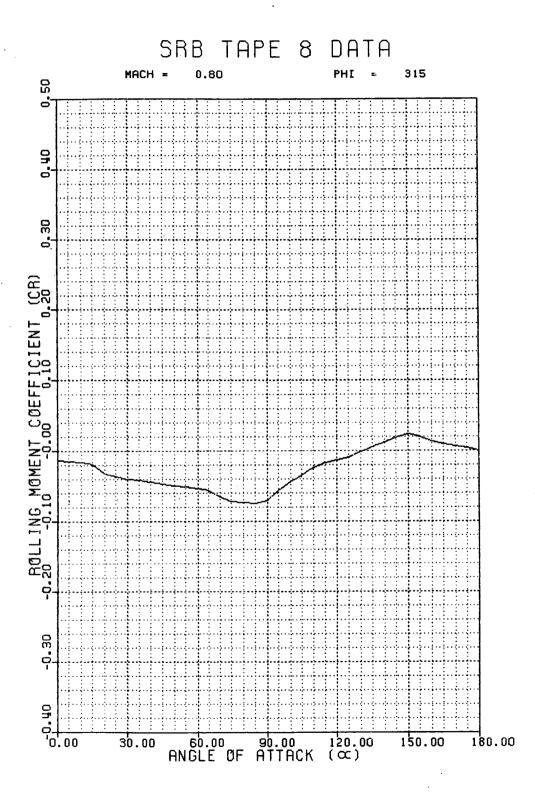
B-770
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-771

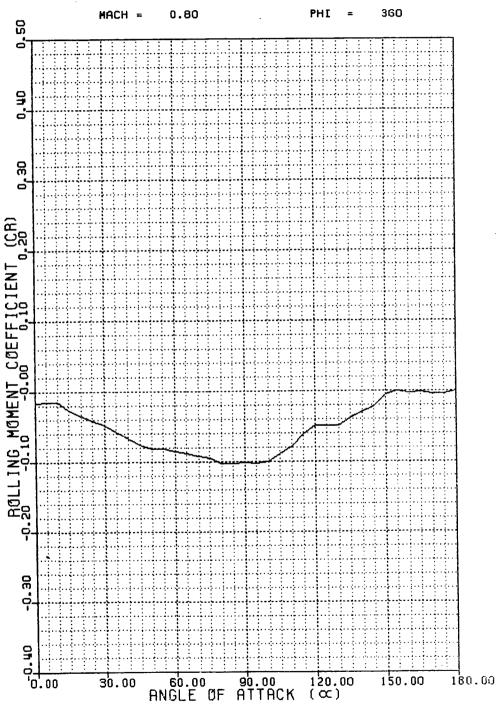


B-772

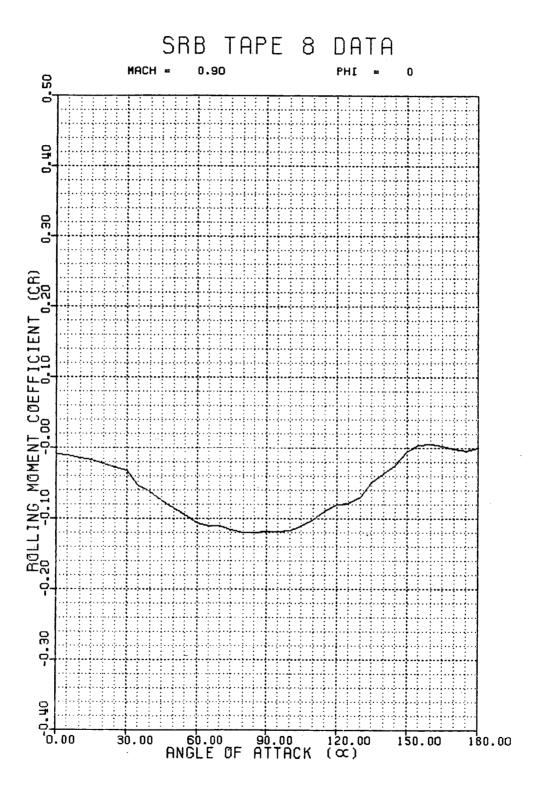


B-773
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

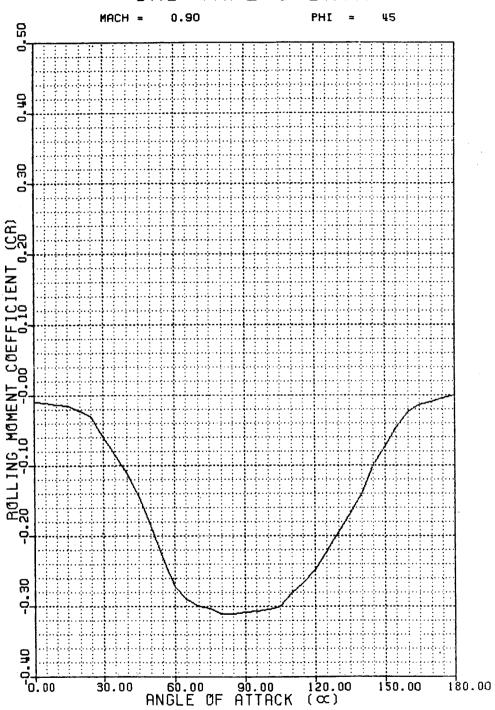
SRB TAPE 8 DATA = 0.80 PHI =



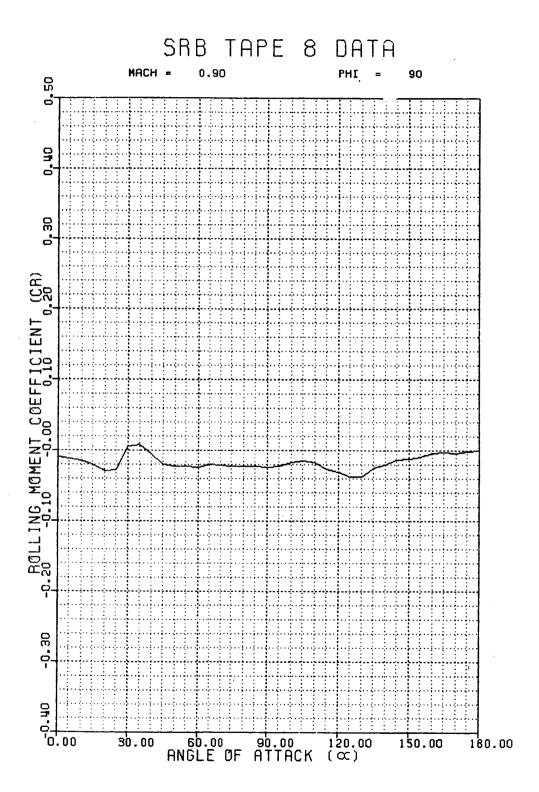
B-774



B-775
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-776



B-777

SRB TAPE 8 DATA 135 0,30 -0°-0-0.00

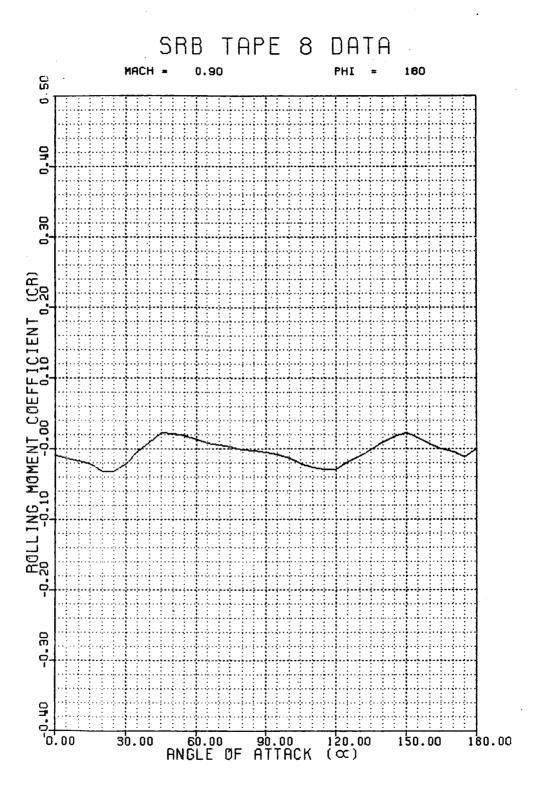
B-778 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

60.00 90.00 120.00 ANGLE ØF ATTACK (∝)

150.00

180.00

30.00

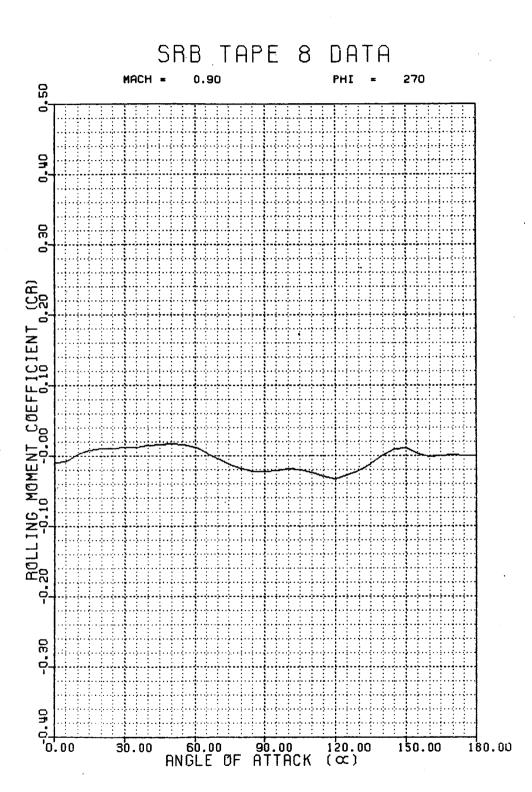


B-779

SRB TAPE 8 DATA 225 0,50 0,30 -0.20 -0.10 MOMENT COEFFICIENT 07.0.00 60.00 90.00 ANGLE OF ATTACK 120.00 (∝) 150.00 180.00

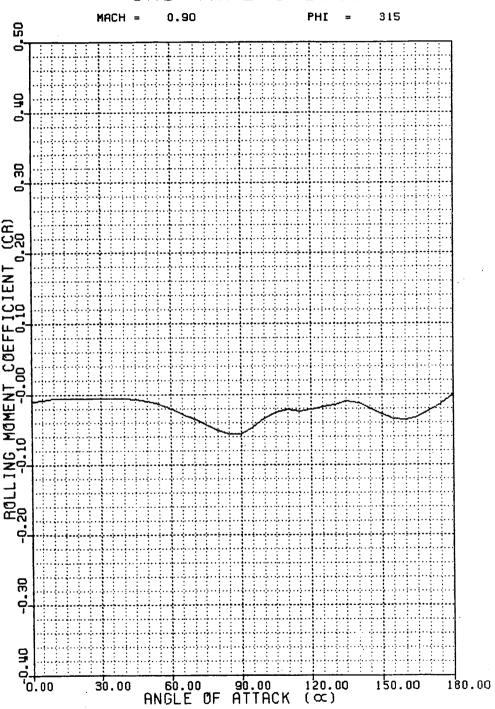
B-780

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-781

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-782

SRB TAPE 8 DATA 360 -9.20 -9.10 MOMENT COEFFICIENT -0.30 0.00

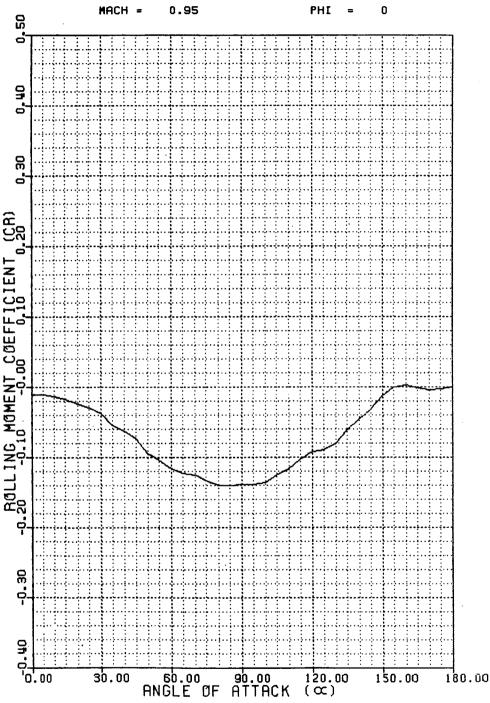
B-783 LOCKHEED-HUNTSVILLE ENGINEERING CENTER

150.00

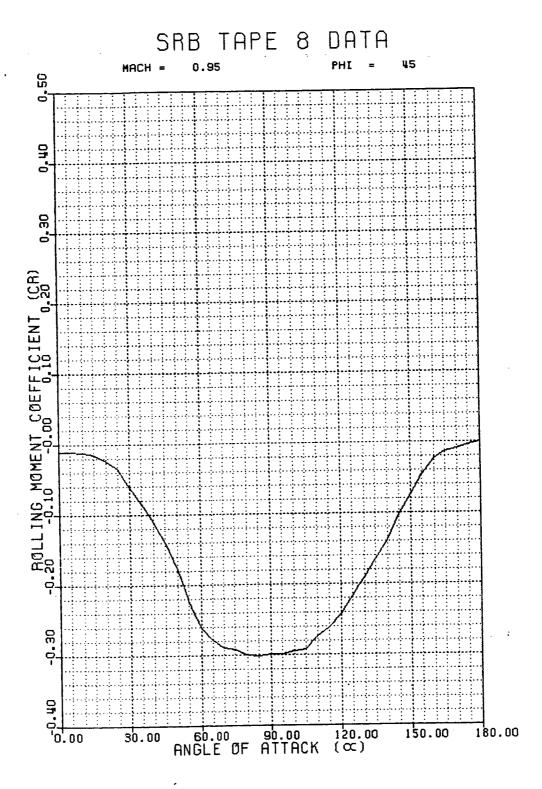
180.00

60.00 90.00 120.00 ANGLE ØF ATTACK (∝)

30.00



B-784



B-785

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 90 20 0,30 -0.30

B-786

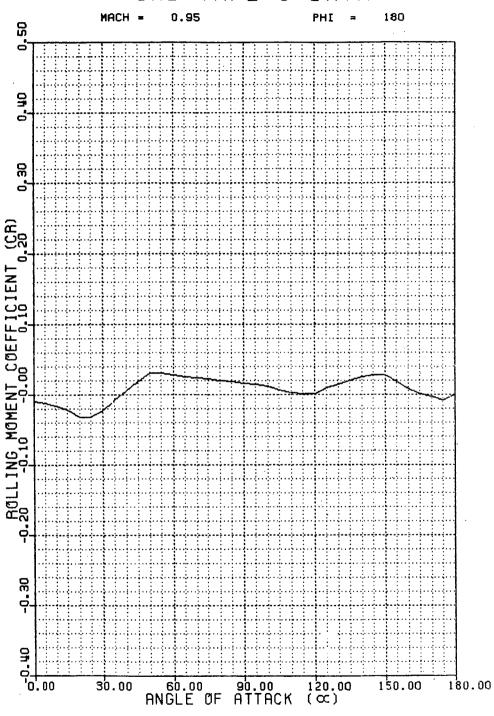
60.00 90.00 120.0 ANGLE OF ATTACK (∝)

150.00

120.00

SRB TAPE 8 DATA 135 0,50 0, 40 0.30 -0.20 FOLLING MOMENT COEFFICIENT (CR) 0.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00 30.00

B-787

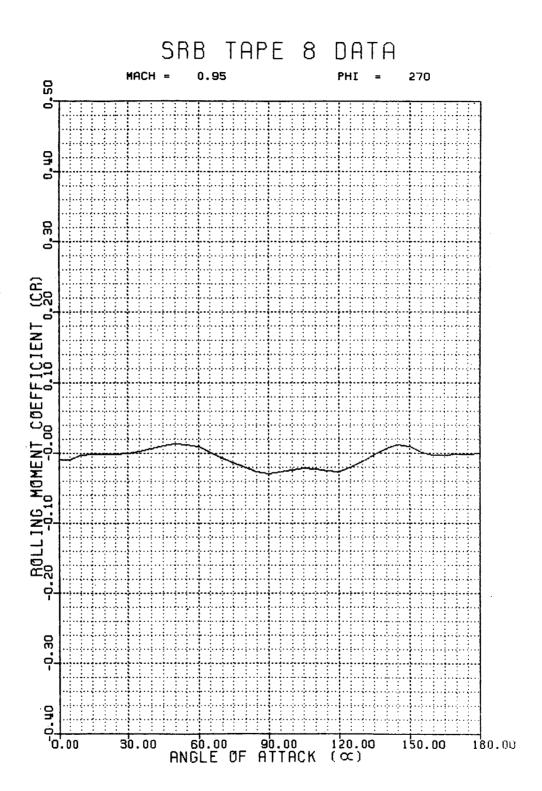


B-788

SRB TAPE 8 DATA MACH = 0.95 225 20 0.00 60.00 90.00 120.00 ANGLE ØF ATTACK (∝) 30.00 150.00 180.00

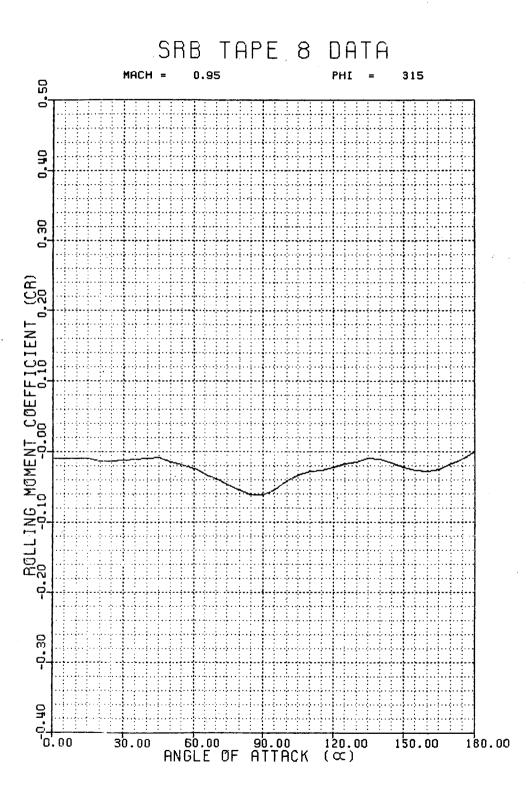
B-789

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-790

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-791
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

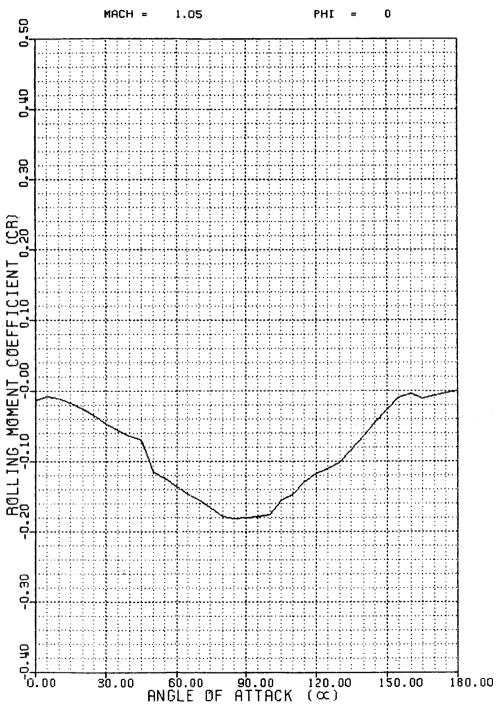
SRB TAPE 8 DATA 360 0,50 0,30

B-792
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

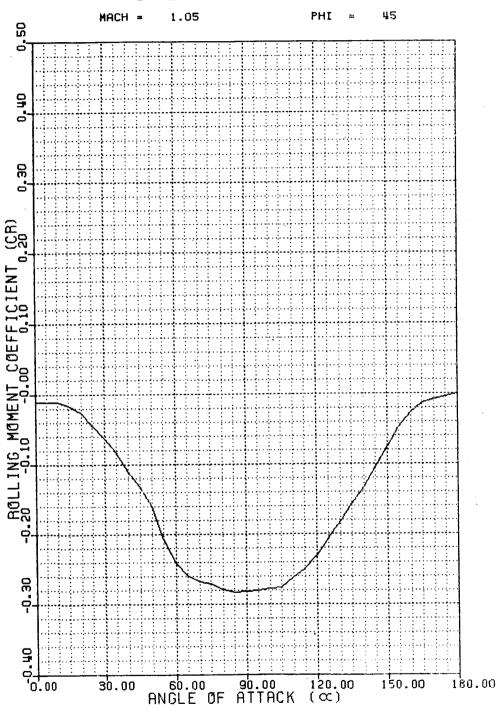
60.00 90.00 120.00 ANGLE UF ATTACK (∝) 150.60

180.00

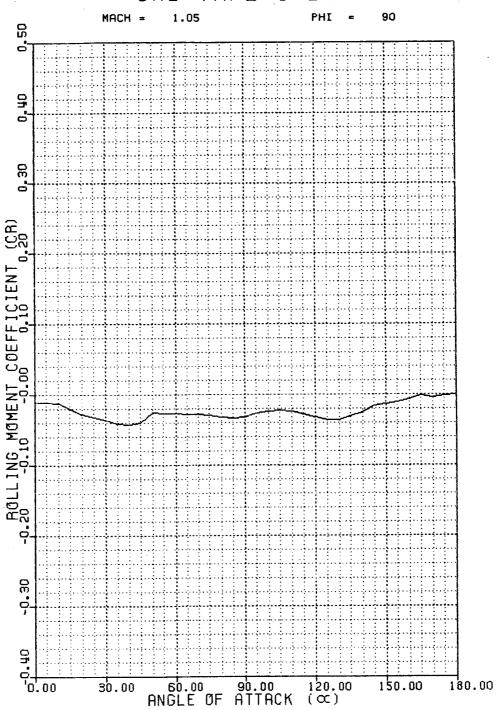
SRB TAPE 8 DATA = 1.05 PHI =



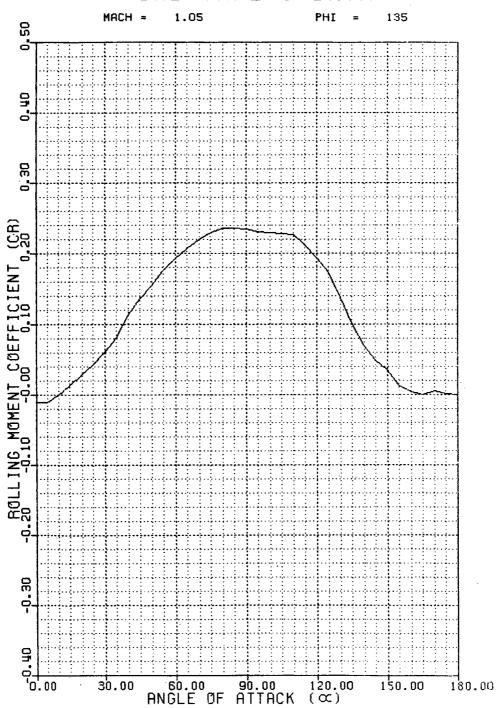
B-793



B-794



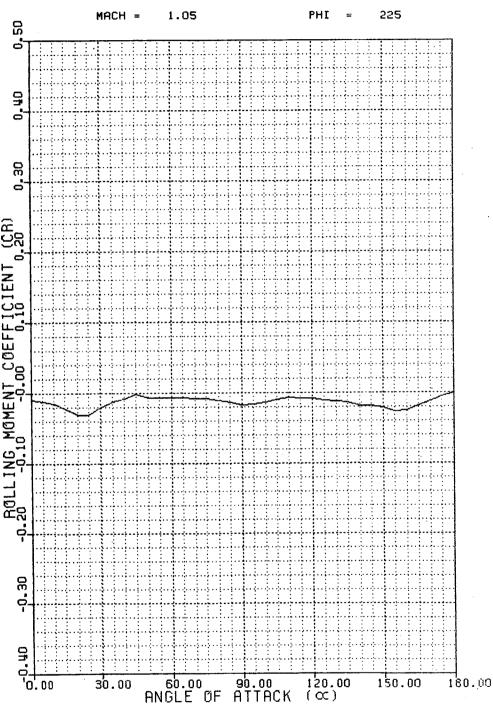
B-795 ·



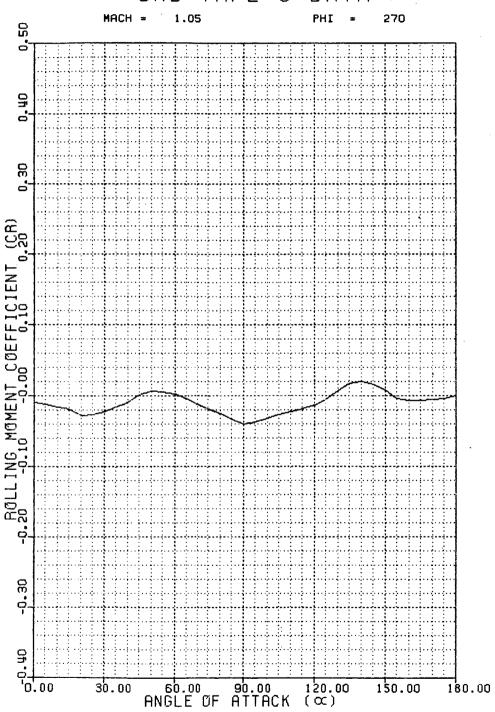
B-796

SRB TAPE 8 DATA MACH = 1.05 180 0.50 30.00 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

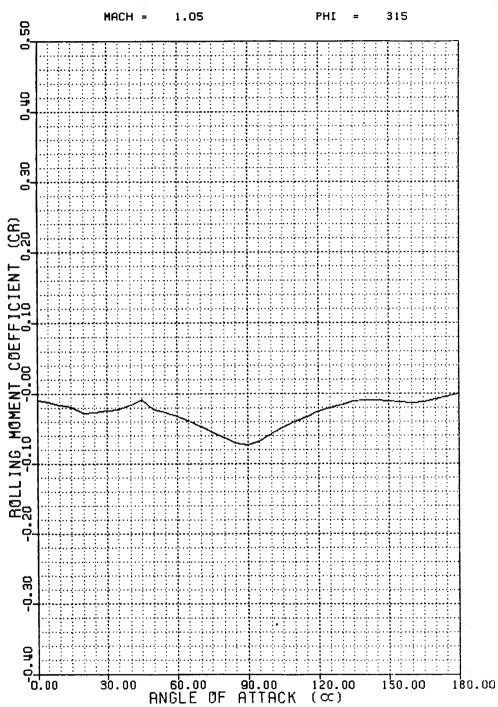
B-797



B-798

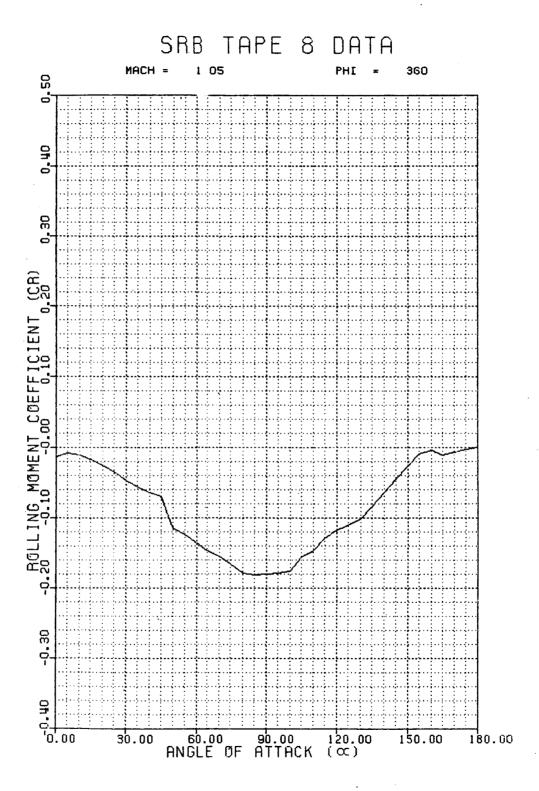


B-799



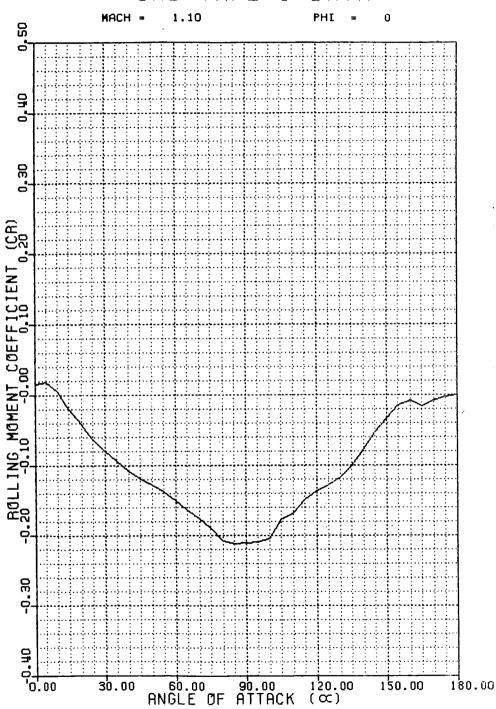
B-800

LOCKHEED-HUNTSVILLE ENGINEERING CENTER



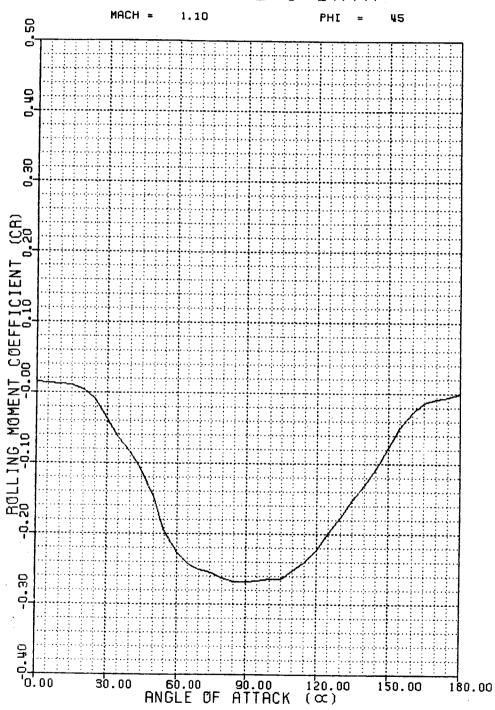
B-801

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

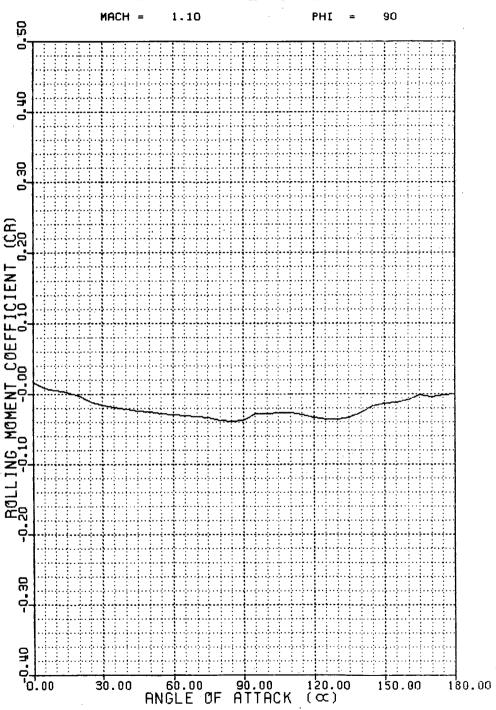


B-802

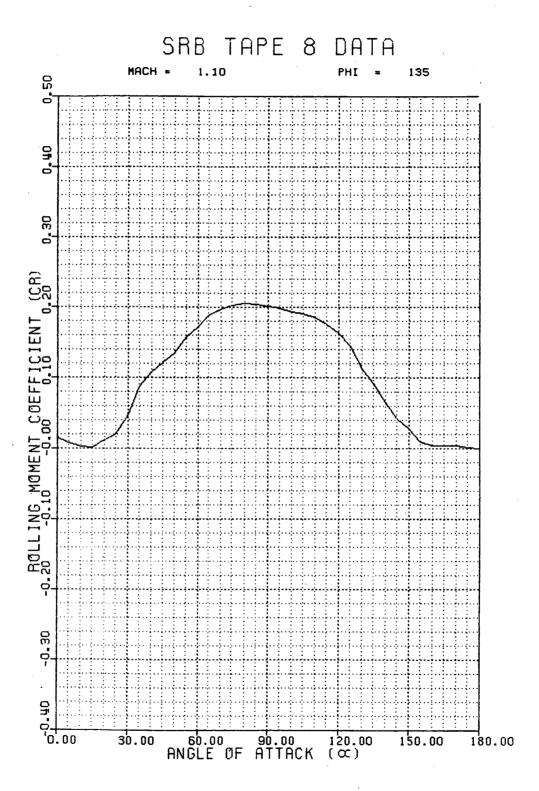
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



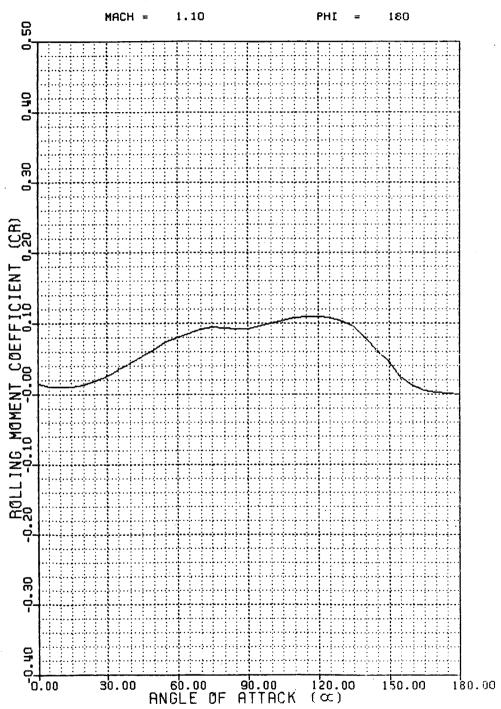
B-803



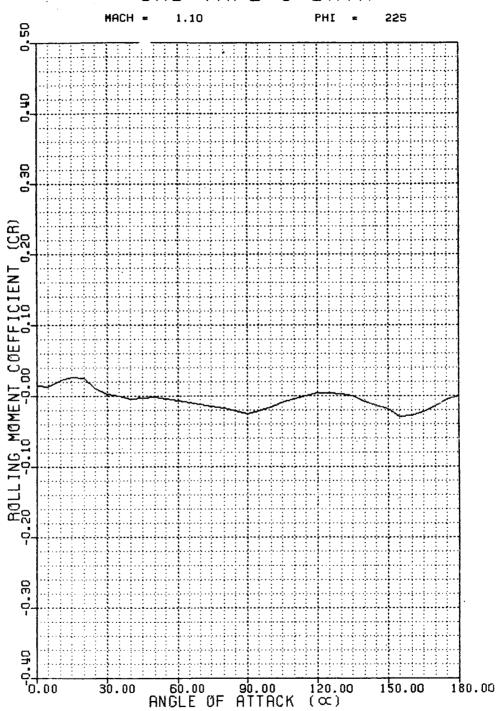
B-804



B-805



B-806

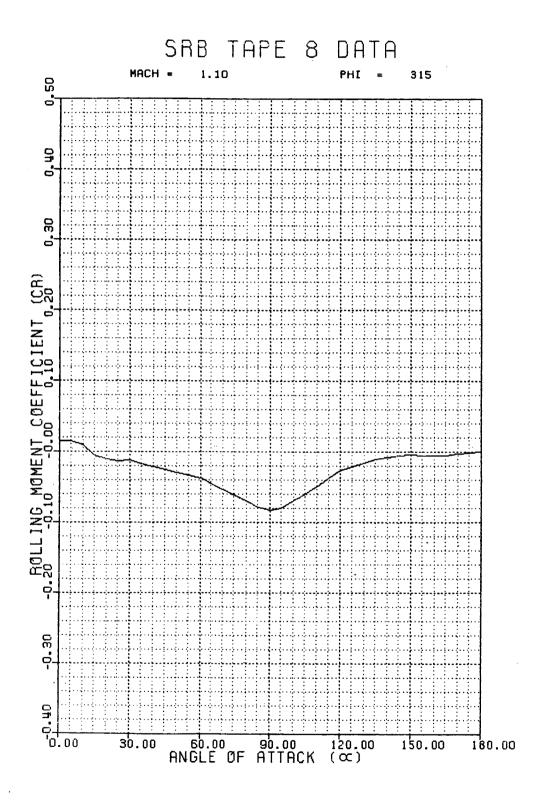


B-807

SRB TAPE 8 DATA 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 150.00 180.00 30.00

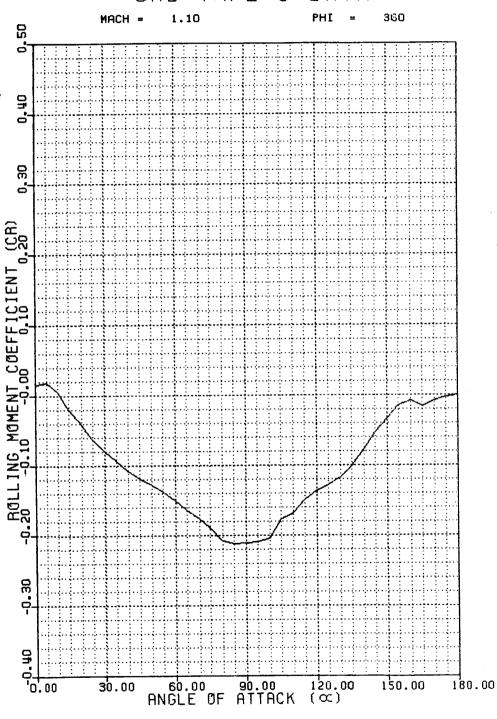
B-808

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

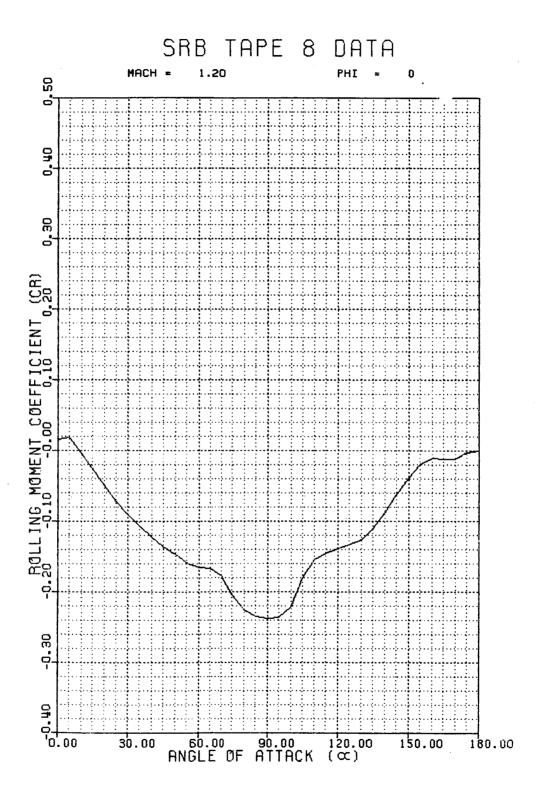


B-809

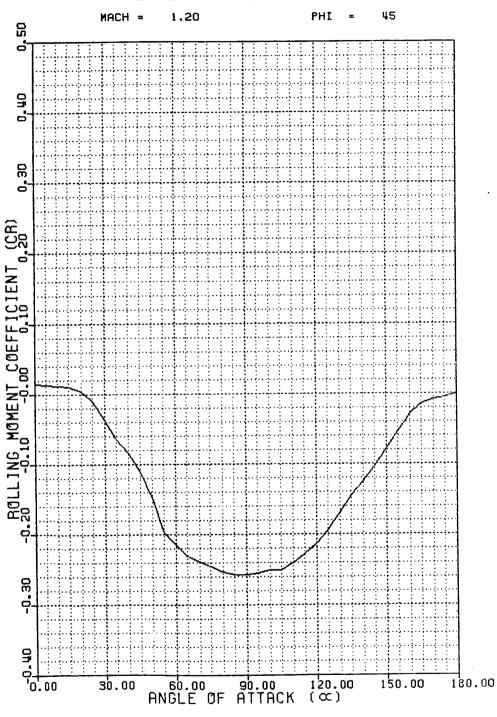
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-810

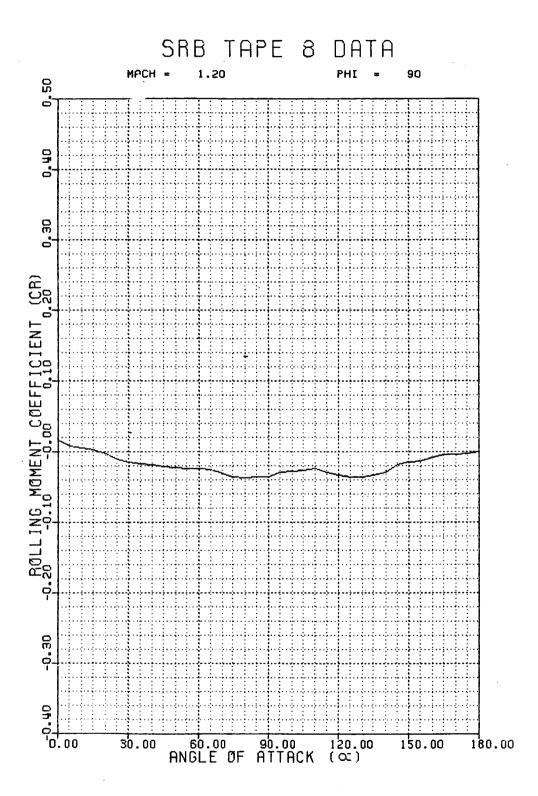


B-811

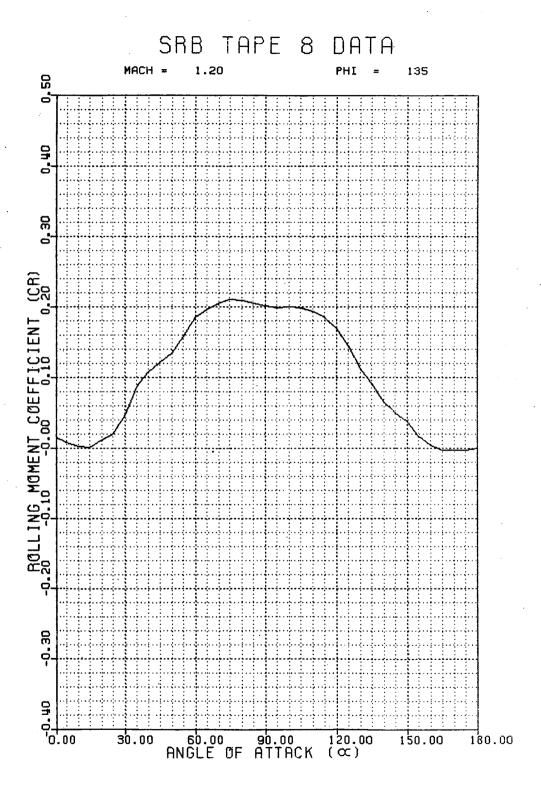


B-812

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

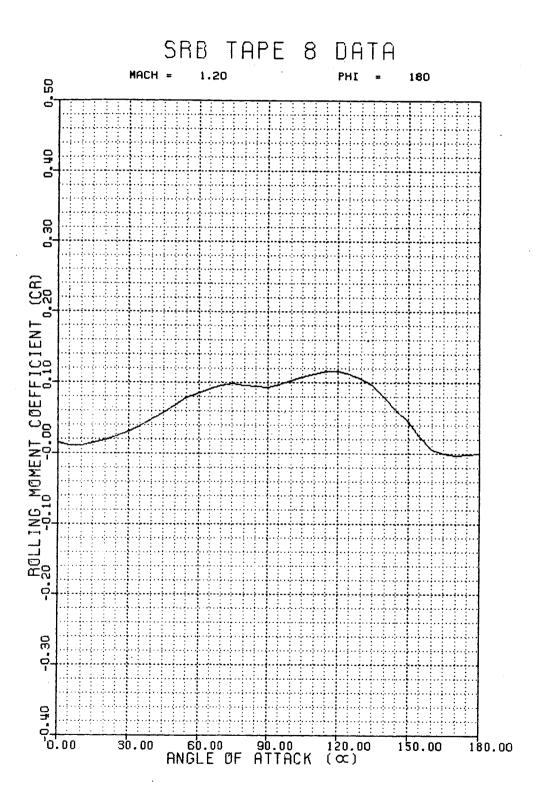


B-813

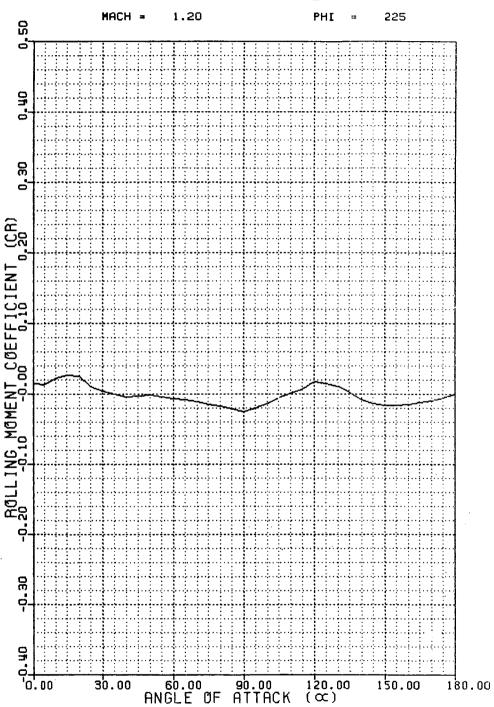


B-814

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

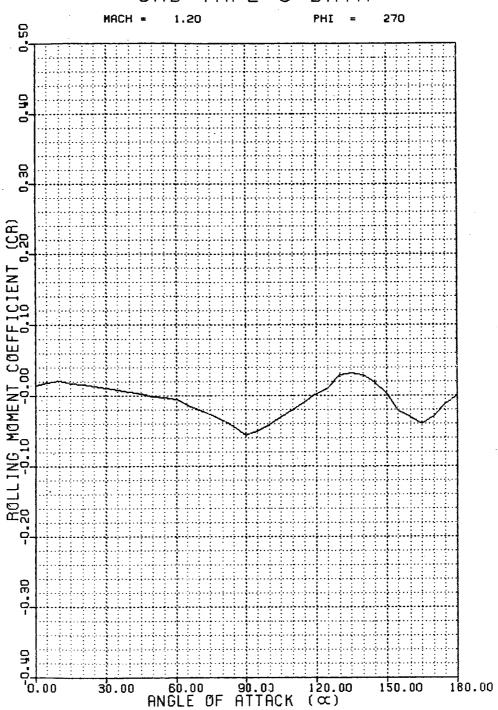


B-815

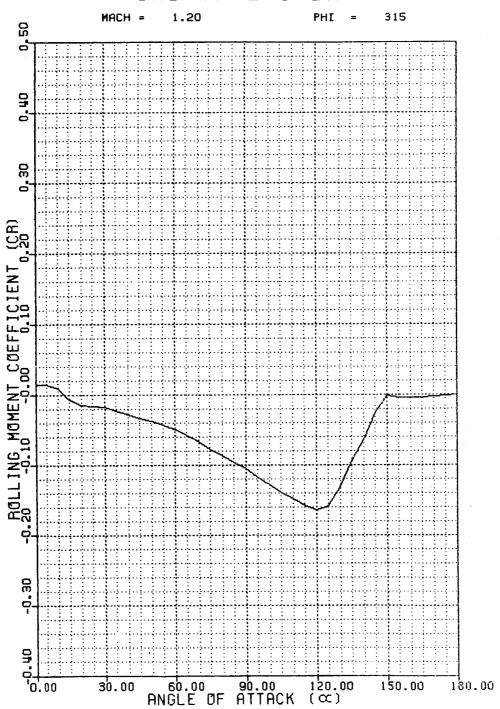


B-816

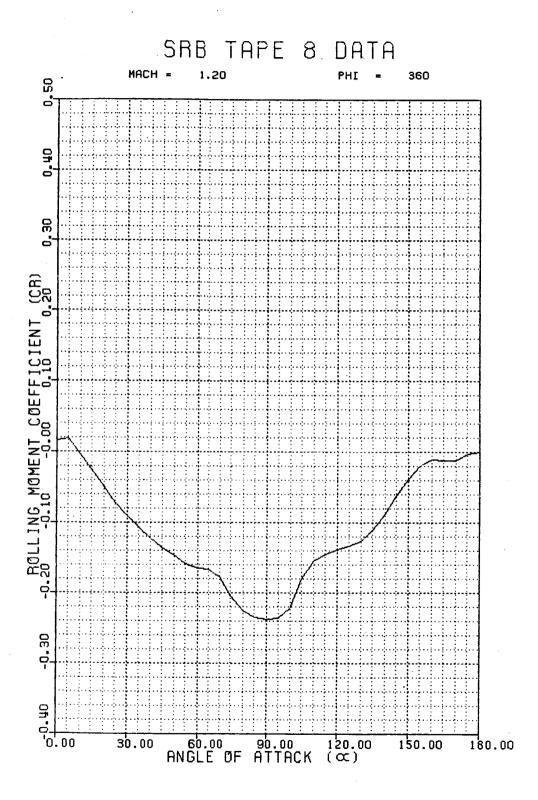
ORIGINAL PAGE IS OF POOR QUALITY



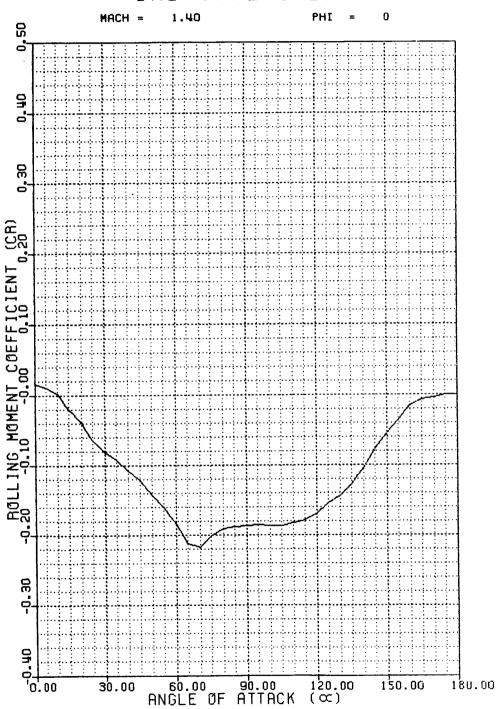
B-817



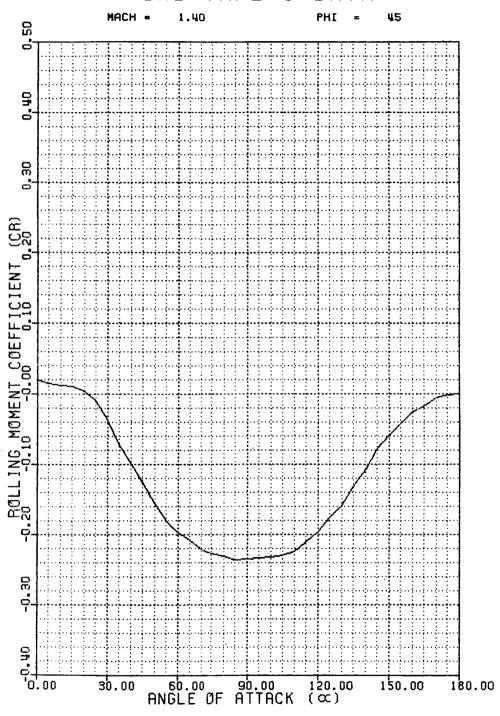
B-818



B-819
.
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-820



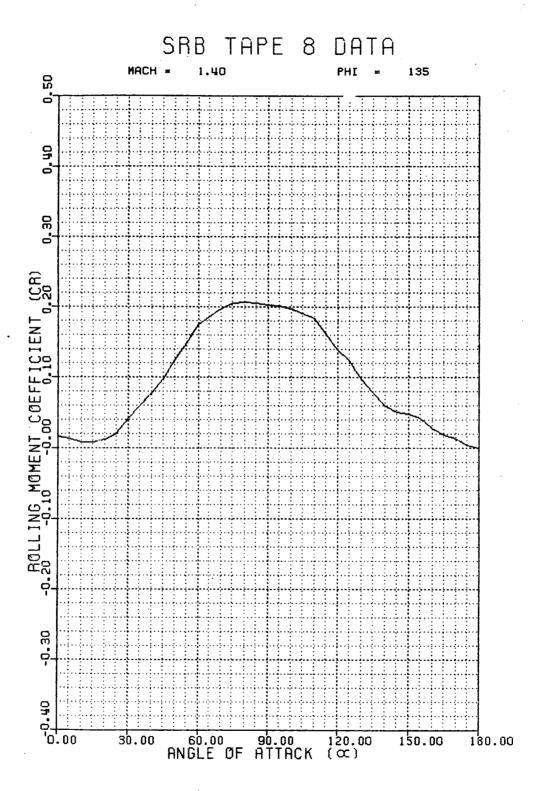
B-821

SRB TAPE 8 DATA 0,50 0,30 -9.20 FOLLING MOMENT COEFFICIENT (CR)

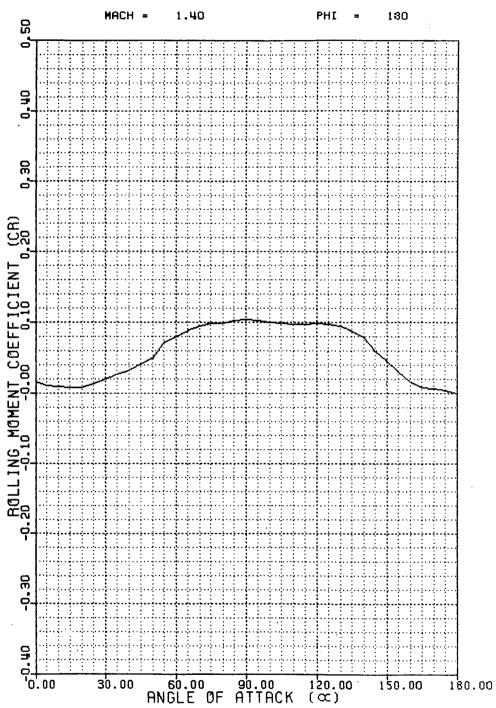
B-822

60.00 90.00 ANGLE OF ATTACK

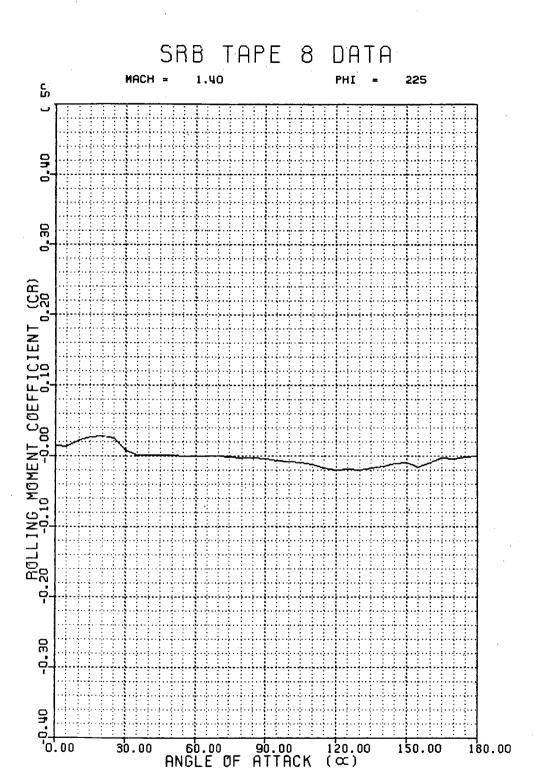
120.00 (∝)



B-823

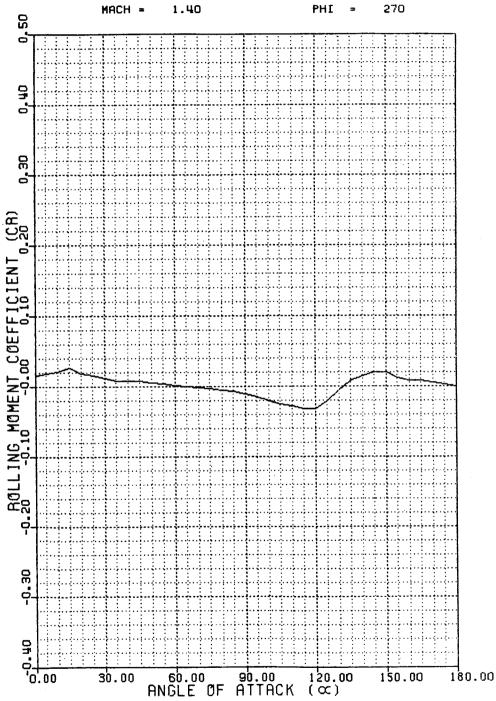


B-824

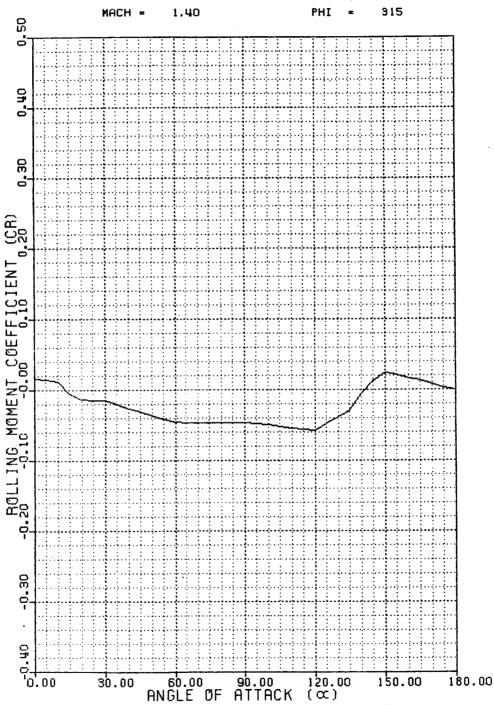


B-825

SRB TAPE 8 DATA - 1.40 PHI -

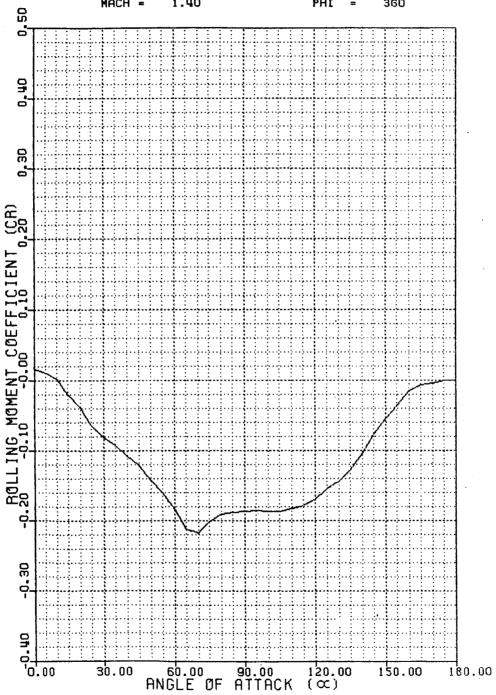


B-826

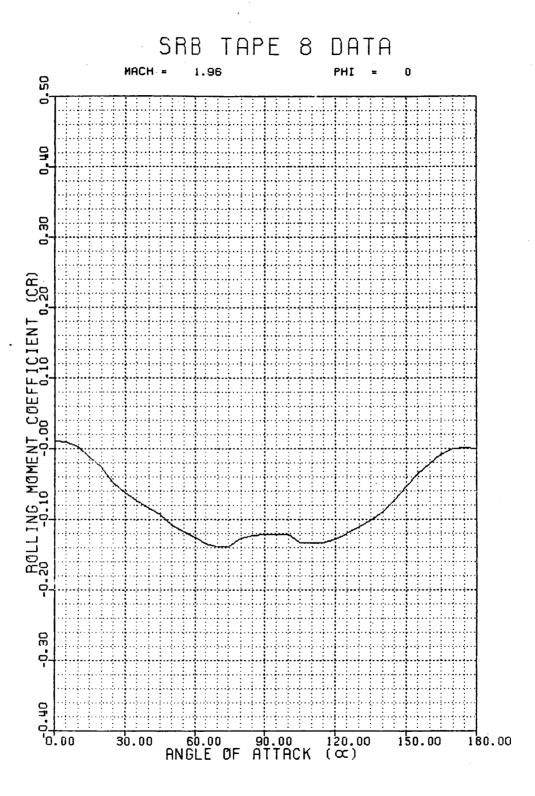


B-827

SRB TAPE 8 DATA CH = 1.40 PHI =

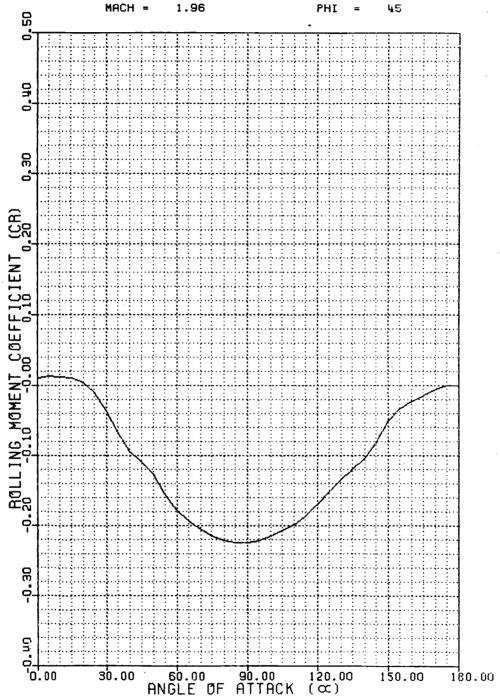


B-858



B-829
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

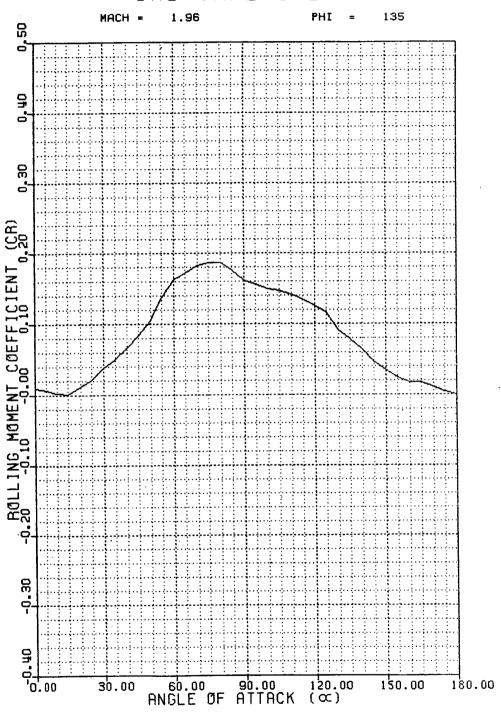
SRB TAPE 8 DATA = 1.96 PHI =



B-830

SRB TAPE 8 DATA -0.30 60.00 90.00 120.00 ANGLE ØF. ATTACK (∝) 150.00 180.00

B-831



B-832

SRB TAPE 8 DATA 180 0,50 COEFFICIENT -9.20 -9.10 MOMENT

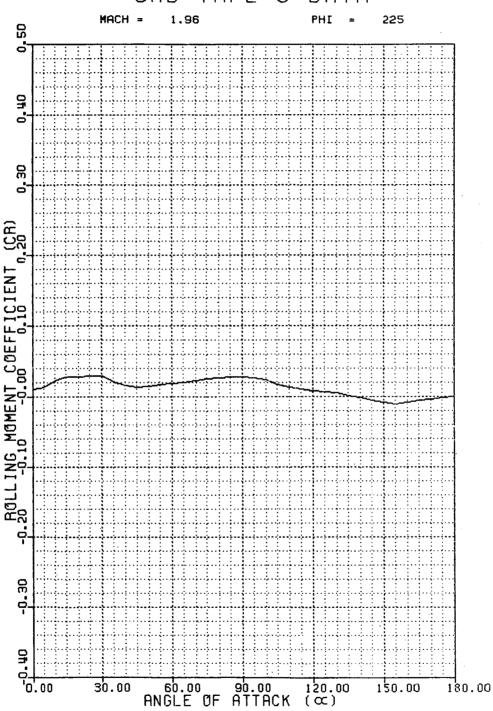
-0°-0

B-833
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

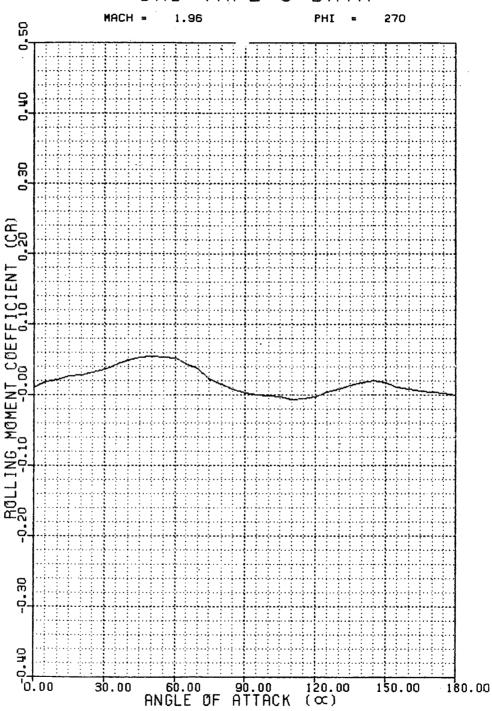
150.00

180.00

60.00 90.00 120.00 ANGLE ØF ATTACK (∝)

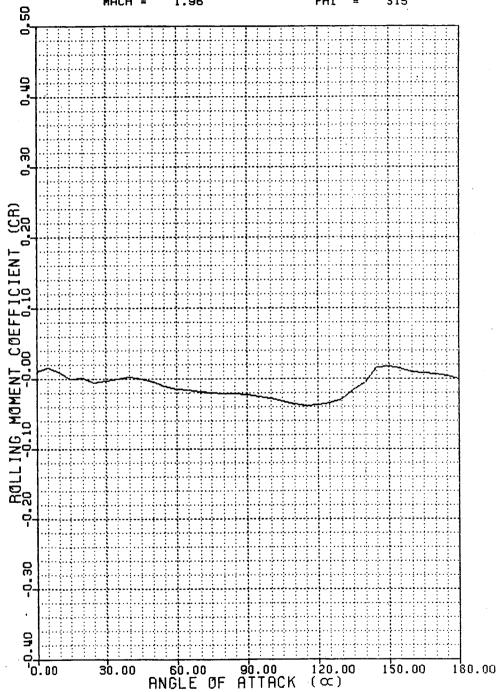


B-834

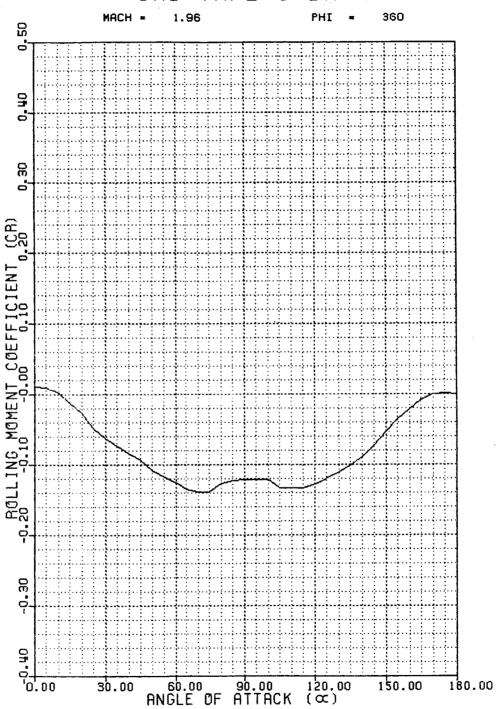


B-835

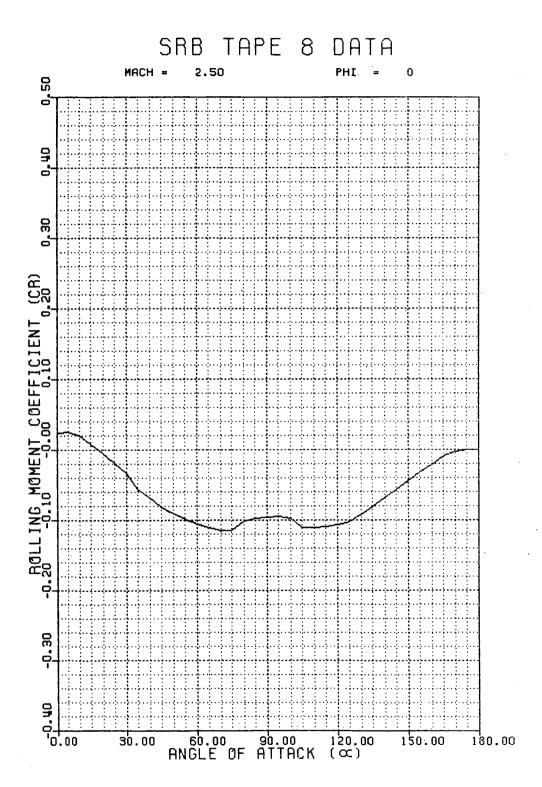
SRB TAPE 8 DATA - 1.96 PHI =



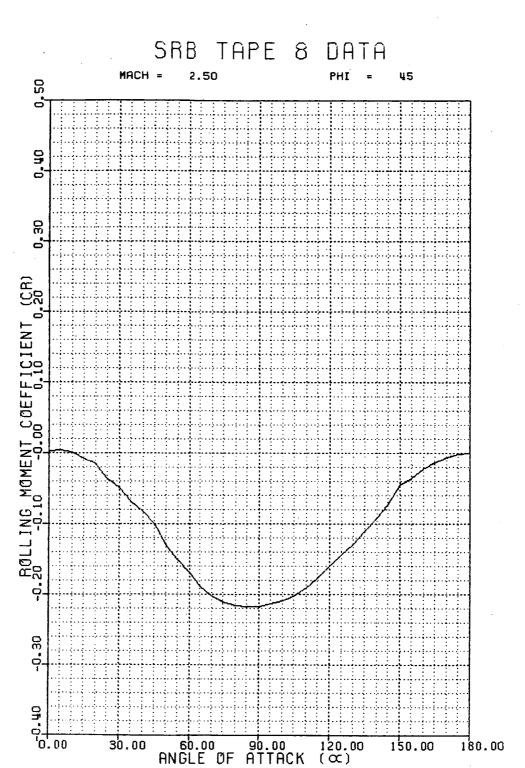
B-836



B-837



B-838
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



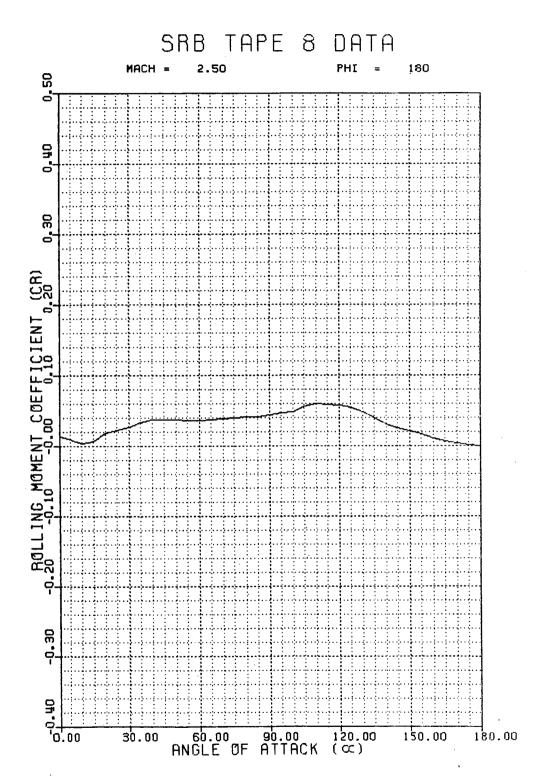
B-839

SRB TAPE 8 DATA 20 0,30 -0.30 60.00 90.00 ANGLE OF ATTACK 30.00 150.00 180.00

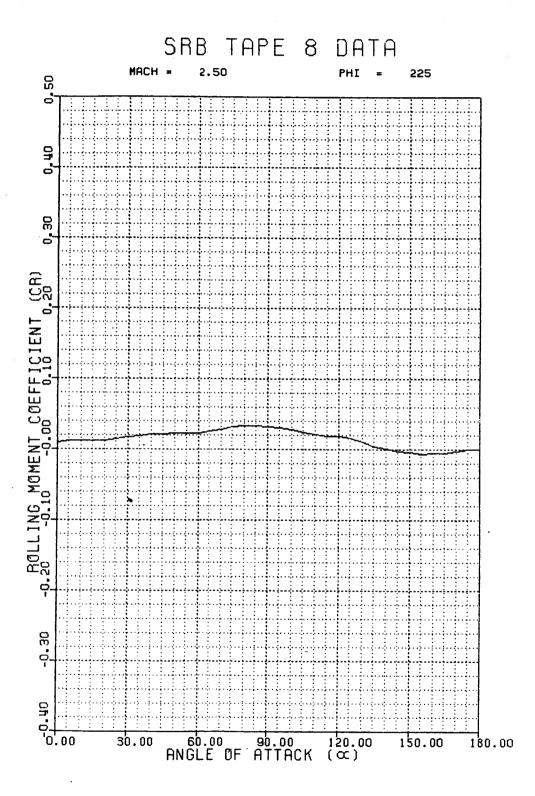
B-840

SRB TAPE 8 DATA 135 2 0,40 0,30 -0.20 FOLLING MOMENT COEFFICIENT (CR) -0-30 0.00 120.00 (∝) 60.00 ANGLE OF 90.00 ATTACK 150.00 180.00

B-841
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



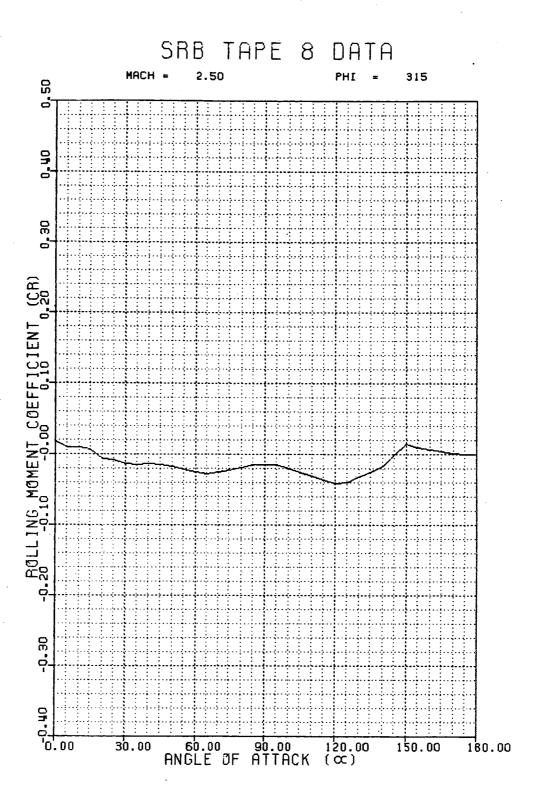
B-842
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



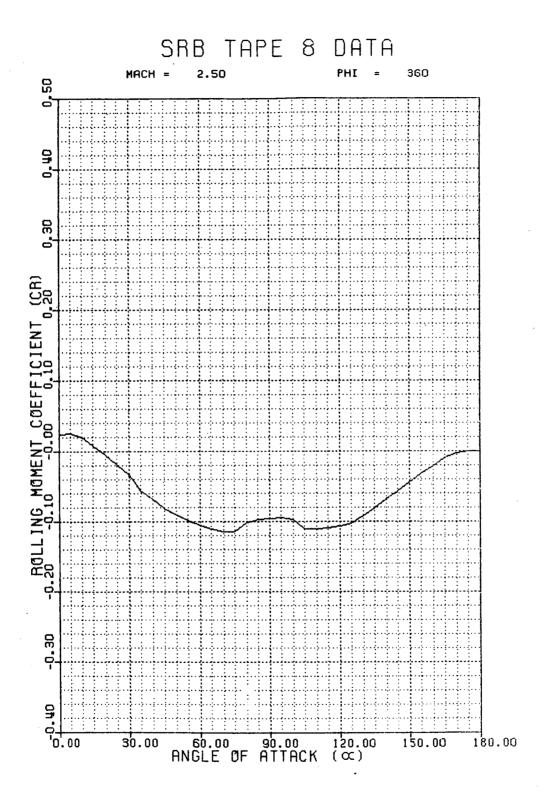
B-843
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 270 20 ROLLING MOMENT COEFFICIENT (CR) 60.00 90.00 120.00 ANGLE OF ATTACK (∝) 150.00 180.00

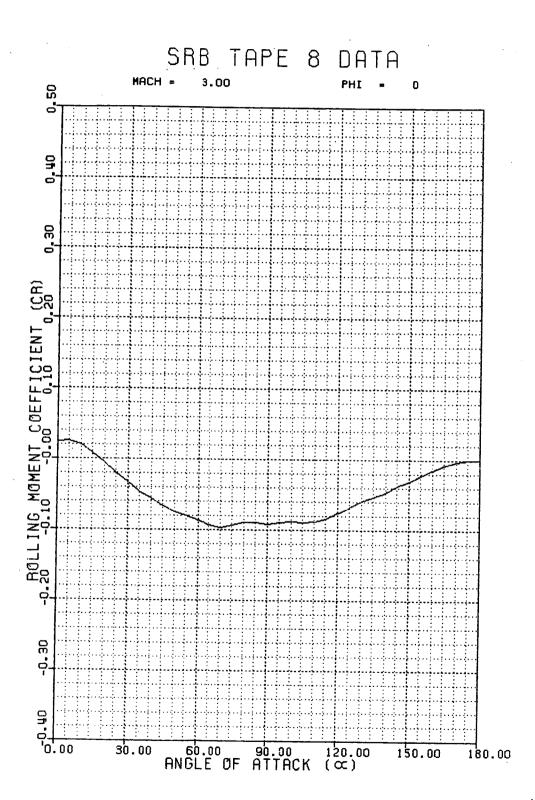
B-844
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



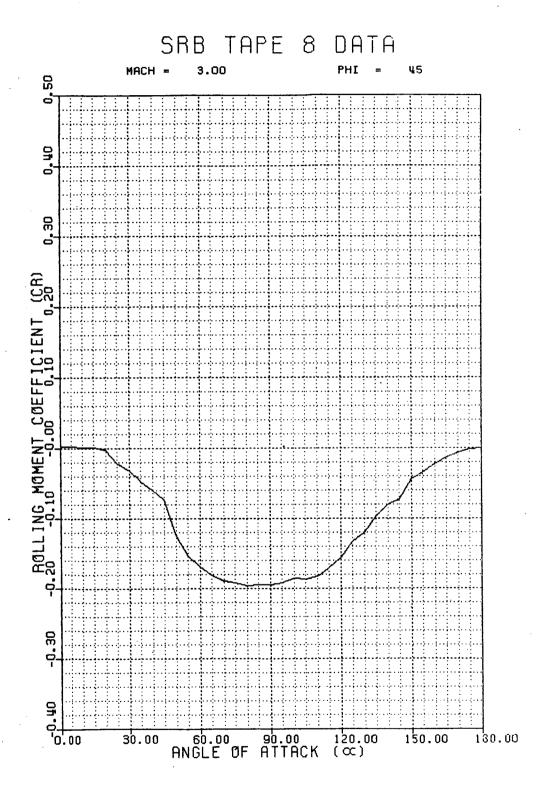
B-845



B-846
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-847

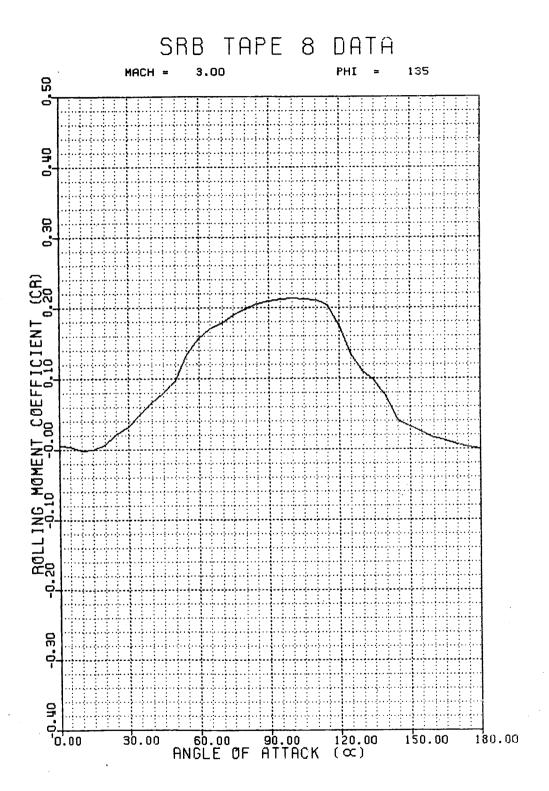


B-848
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

SRB TAPE 8 DATA 20 0.40 0,30 -0.20 -0.10 MOMENT COEFFICIENT (CR) -0.30 0.00 120.00 (∝) 60.00 90.00 ANGLE OF ATTACK 180.00 30.00 150.00

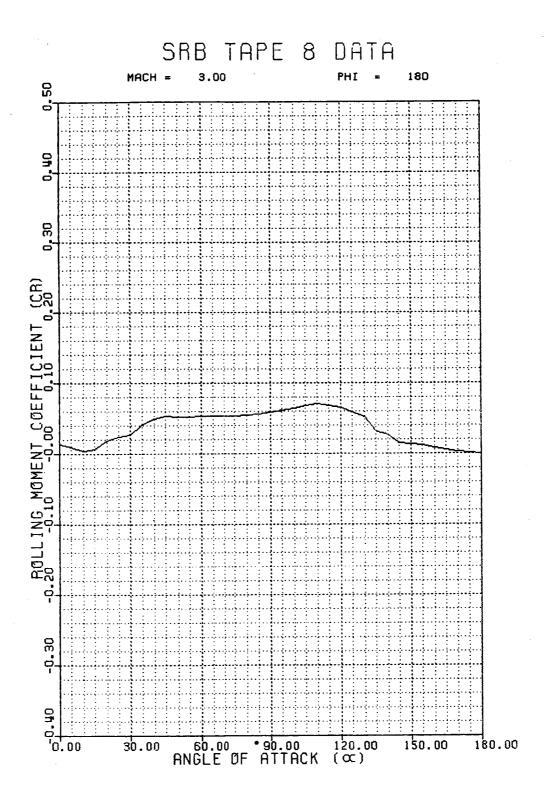
B-849.

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

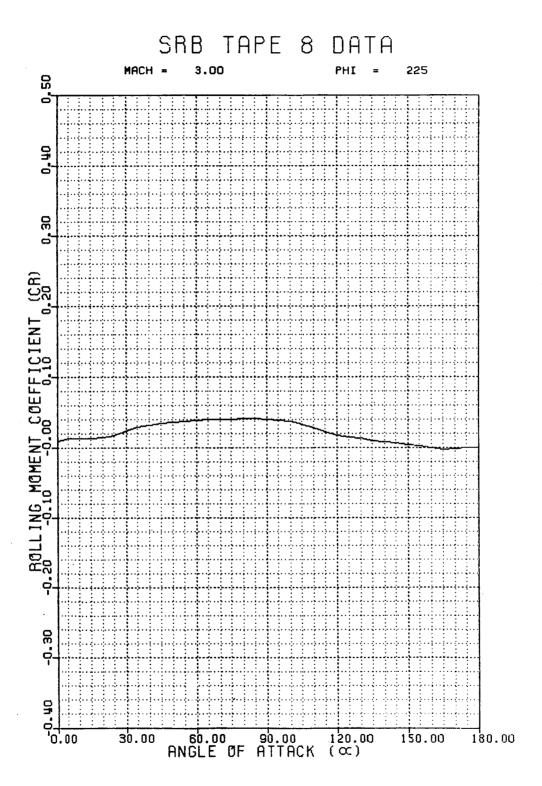


B-850

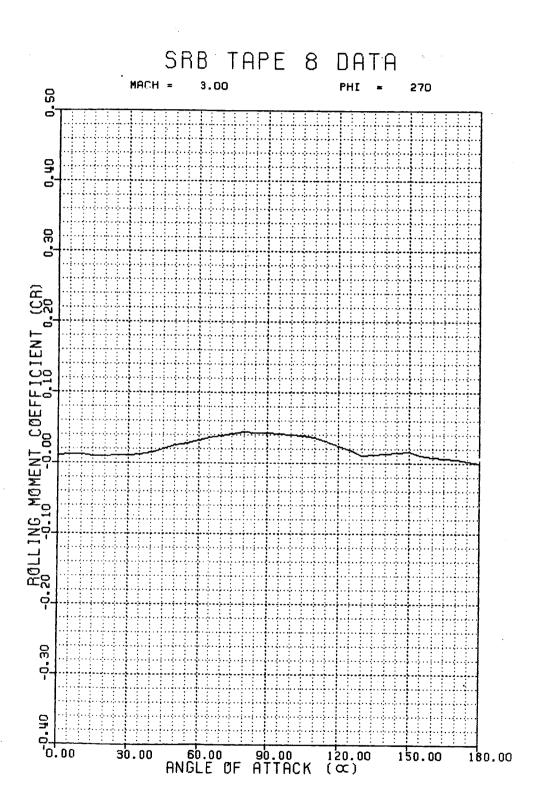
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



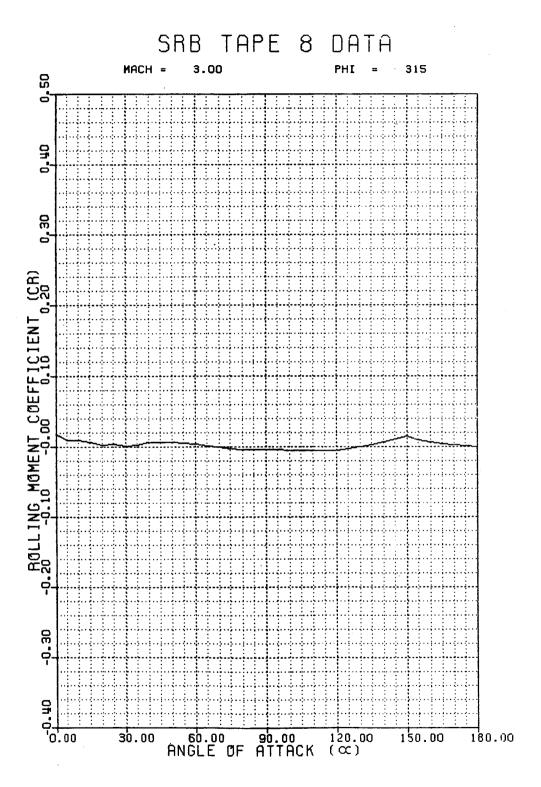
B-851



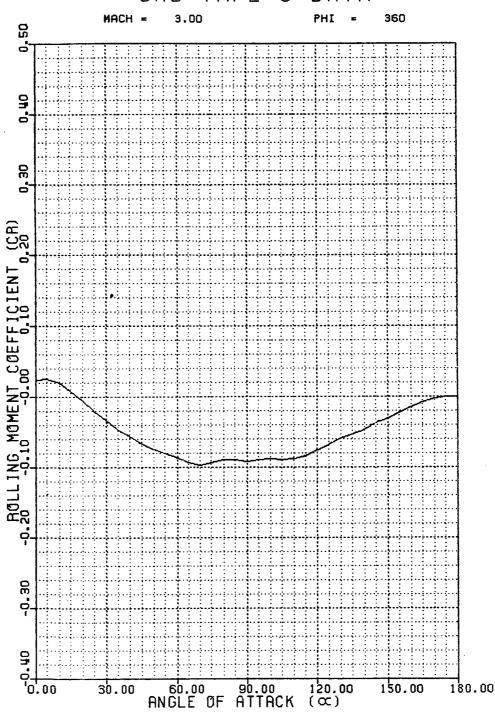
B-852
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



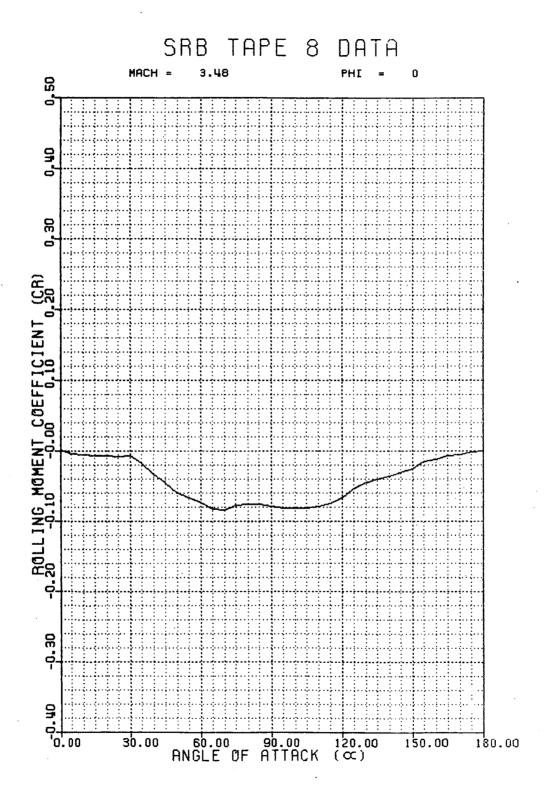
B-853



B-854
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

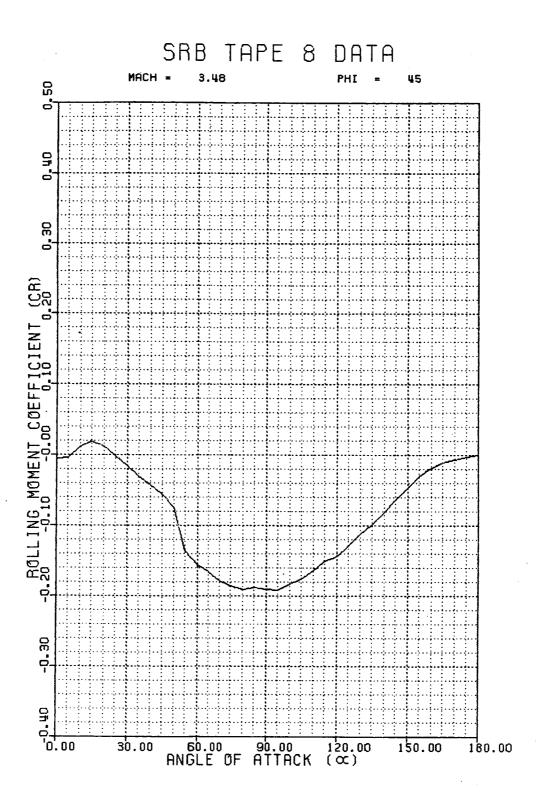


B-855

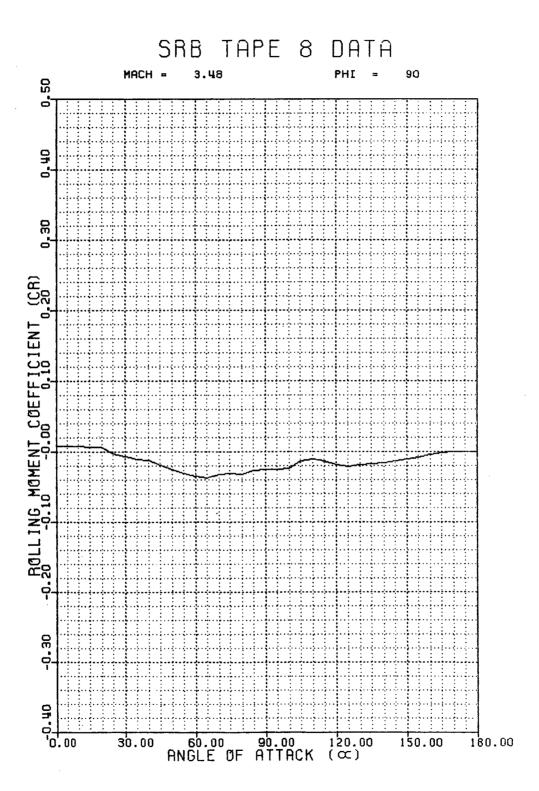


B-856

LOCKHEED-HUNTSVILLE ENGINEERING CENTER

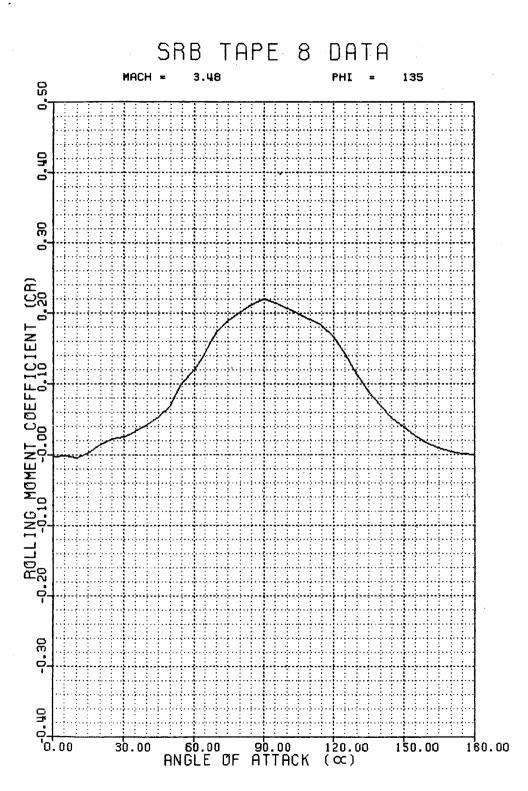


B-857

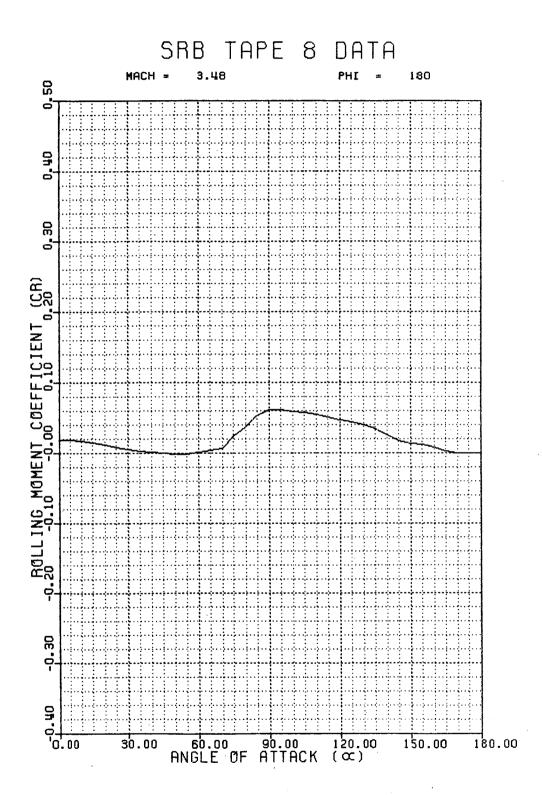


B-858

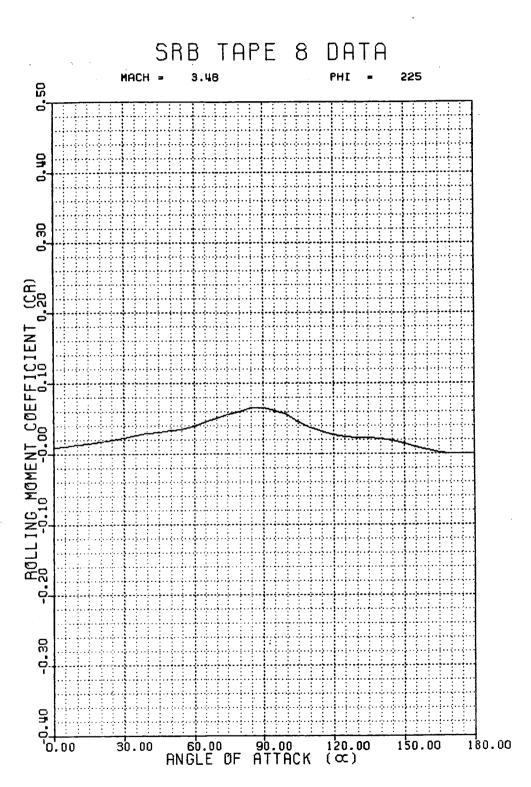
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-859

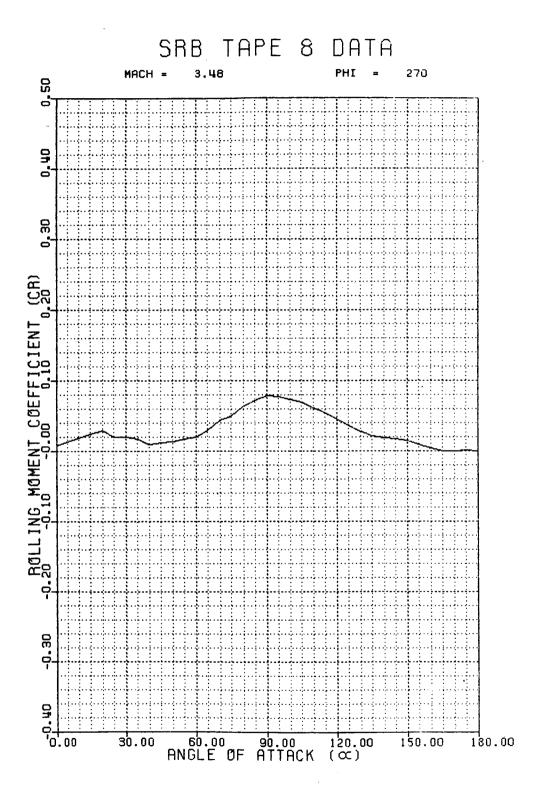


B-880



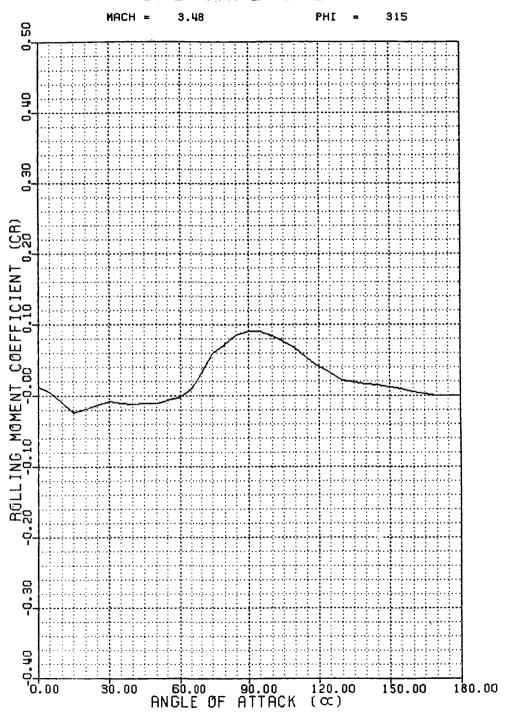
B-861

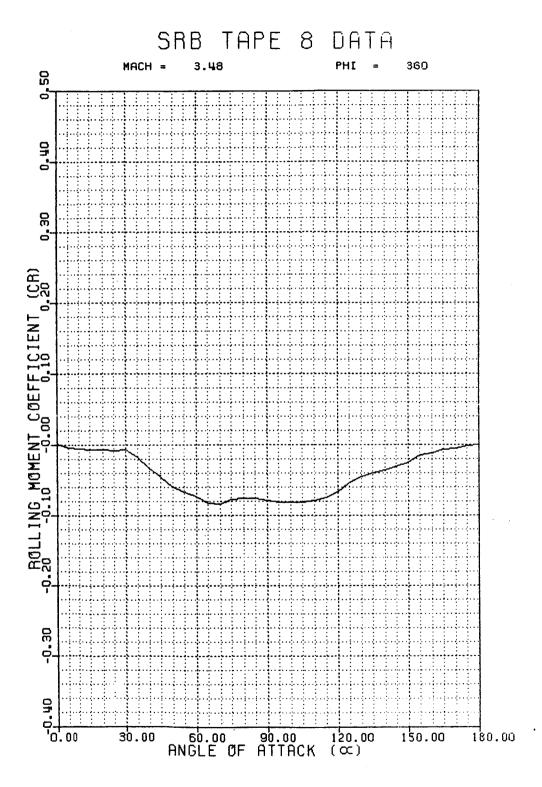
LOCKHEED-HUNTSVILLE ENGINEERING CENTER



B-862
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

ORIGINAL PAGE IS OF POOR QUALITY





B-864
LOCKHEED-HUNTSVILLE ENGINEERING CENTER